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ABSTRACT

During Fall 1970 the questionnaire for the Winter 1970-1971, or fourth follow-up, of the 1965-1966 current population survey (CPS) of high school seniors was completed by the Columbia researchers and Census Bureau personnel jointly. The field phase of the follow-up was conducted by Census in Winter 1970-1971, followed by data processing by Census. This technical progress report contains more than 90 pages of appendix-material including the following: (1) flow-chart of principal study data sources; (2) findings for the third or Winter 1969-1970 follow-up of the Fall 1965 CPS high school seniors including high school curriculum and academic status, academic aspirations in high school and post-high school eventuations, additional personal, socio-economic and academic variables and academic status, parental academic expectations, post-high school guidance counseling, and eventuations; (3) findings for the 1967-1970 CPS computer tapes including 1960-1970 college entrance rates, duration of college attendance and objective, benefits of attendance, changes in elementary and high school attendance, and progression of children through school; and (4) questionnaires for the third and fourth follow-ups. (Author/RL)

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1970-1971 Technical Progress Report

FOLLOW-UP OF CROSS-SECTION OF 1965-1966 HIGH SCHOOL SENIORS

Bureau of Applied Social Research

Columbia University

New York, New York

September 1971

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August 31, 1971

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Technical Progress Report

Office of Program Planning and Evaluation Contract No. OEC-08-080856-4651(010)

Period covered by report: September 1, 1970 through August 31, 1971

Name of Institution: Columbia University

Title of Project: Follow-up of U. S. Cross-Section of 1965-1966 High School Seniors

Project Director: A. J. Jaffe

Major Activities, September 1, 1970 through August 31, 1971

Fall 1965 high school senior follow-ups

During Fall 1970 the questionnaire for the Winter 1970-1971 or fourth follow-up of the 1965-1966 Current Population Survey high school seniors was completed by the Columbia researchers and Census Bureau personnel jointly. The field phase of the follow-up was conducted by Census in Winter 1970-1971, followed by data processing by Census. At the time of writing, the Columbia researchers have just been informed that Census is about to forward to them the IBM deck of cards for this fourth follow-up, plus the technical specifications. The various steps leading to and including analysis will then become possible at Columbia--printouts and marginals for the deck, residual cleaning of the deck, creation of a new summary deck incorporating data from the basic Fall 1965 decks and earlier follow-up decks, and finally cross-tabulations and analyses.

During the present reporting period analysis of the third or Winter 1969-1970 follow-up of the 1965-1966 seniors has been substantially completed. The IBM deck for this follow-up was printed out, marginals were obtained, and residual cleaning of the deck took place. A summary deck containing earlier survey data on the respondents, as well as the 1969-1970 information, was created. This summary deck was used to produce extensive cross-tabulations, and these tabulations were analyzed. Findings for many, though not all, of these tabulations have been formally written-up and are presented in the appendices to the present report. It is expected that several additional formal analyses will be completed in the near future, and will then be made available to OE.

1967, 1968, 1969, and 1970 Current Population Survey tapes

Special tapes with selected educational and other data from the October 1967, 1968, and 1969 Current Population Surveys of the Census Bureau were received by the Columbia researchers during this reporting period. After initial testing for compatibility with the Columbia computer, extensive tabulations were made from these tapes, in most instances initially for the individual years, and then for the three years combined to secure sufficient cases for detailed analysis. Later in the reporting period the 1970 CPS tape was received from Census, and a number of tabulations have been made from this tape, as well as for the four years combined. Given the very large amount of information contained on these tapes, additional tabulations may be expected over the months ahead.

To date, the Columbia researchers have presented a considerable part of the raw computer output of the CPS tapes in summary tables. Copies of a number of these tables have already been sent to OE for the project file. In addition, several formal analyses have been made, including supporting statistics, for more significant areas of investigation, and are included in the appendices to this report. Here we will only identify briefly some of these more significant areas: 1) Age cohort analysis of college going by sex and race and by Census division; 2) Detailed college dropout patterns by sex and race and by Census division for younger age cohorts; 3) Changes in elementary and high school attendance during the 1960's for whites and non-whites and for central cities, SMSAs outside central cities, and areas outside SMSAs, with separate consideration of school enrollment, and of proportion below, at, and above the modal grade for a given age, by race and residence; 4) Analysis of progression through school by race and residence, representing changes in proportions at or above the expected grade for children at each successive year of age, 7 through 15; 5) Analysis of educational attainment, occupation, and imputed earnings for various educational attainment groups, high school graduate through college graduate (earnings imputed on the basis of occupation), for younger men and women in the mid to latter 1960's; 6) Proportions of male and female high school graduates entering college immediately down the years (data from 1960 and 1966 CPS surveys provided a longer time span than the one afforded by the 1967-1970 tapes alone).

In addition to the above topics, which have been analyzed in some detail, there is a large volume of computer output which awaits formal analysis, and will be reported upon over the months ahead.

American Council on Education paper

The Columbia researchers prepared a paper during the current reporting period for presentation at the October 1971 annual meetings of the American Council on Education in Washington. The paper "Two Models of Open Enrollment," incorporated a number of the findings from the CPS tabulations described above. This paper will be available in paperback at the time of the meetings, and later in hard cover. The CPS findings from the paper are appended to the present report.

Articles in Change, the Magazine of Higher Education

An article entitled "Open Admissions and Academic Quality," by A. J. Jaffe and Walter Adams, summarizing major findings from the Winter 1968-1969 or second follow-up of the 1965-1966 CPS high school seniors, appeared in the March-April 1971 issue of Change (pp. 11,78). The article is not appended, since it represents a digest of the paper by these authors "Academic and Socio-Economic Factors Related to Entrance and Retention at Two- and Four-Year Colleges in the Late 1960's," included in Appendix C of the last progress report.

These same authors are now preparing a second article for the November 1971 issue of Change. The authors are including in this article a number of the findings from the CPS materials described above, and summarized in the appendices to this report.

Future Activities

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Activities in the months ahead will be the following:

1. Completion of analysis of the third or Winter 1969-1970 follow-up of the 1965-1966 CPS high school seniors.
2. Preparation of a summary deck of cards, including follow-up and earlier data, for the Winter 1970-1971 or fourth follow-up of the 1965-1966 seniors, and tabulation and analysis of that summary deck.
3. Continuing analysis of the 1967, 1968, 1969, and 1970 CPS tapes, including analysis of existing computer output and some unknown amount of additional output.
4. Completion of the article for the November 1971 issue of Change magazine described above.
5. Delivery of the paper incorporating CPS findings (described above) at the October 1971 annual meetings of the American Council on Education in Washington.
6. Preparation of the questionnaire for the fifth and final follow-up of the 1965-1966 CPS high school seniors. Preparation will be done by the Columbia researchers in consultation with OE and Census personnel.
7. Work on a summary volume, incorporating major findings and implications of the entire study down the years.

It should be noted that the summary volume may be planned in large part, and to some extent drafted, prior to analysis of the Winter 1970-1971 follow-up, and completion and analysis of the fifth and final follow-up of the 1965-1966 CPS seniors. Completion of the volume, however, will be determined by completion of the final survey. This date is not at all

certain as of now for a number of reasons, principally the timing of the field work for this last follow-up so as to secure the maximum of useful information for the maximum number of respondents. The drafting of the questionnaire for the final follow-up has been delayed pending information from Census on the usable response rate for the fourth or 1970-1971 follow-up. The response rate will in considerable measure determine how much data we will attempt to obtain on the final follow-up, and may well affect the timing of the survey and the strategies employed in the field. These questions should be resolved in the course of the next few weeks.

Finally, as the opportunity arises, and as has been the Columbia researchers' practice in the past, dissemination of study findings will be sought through periodical publication, papers, and so forth.

Appendices

Appendix A
Flow-chart of Principal Study Data
Sources

STUDY FLOW-CHART

Source and brief description of study data

Year of survey	Census CPS High School Seniors	Census CPS Household Sample	Office of Education "Coleman Study"-- High School Seniors	Columbia Researchers' Pretest of New York Area High School Student Questionnaire
1959	Survey of Fall 1959 seniors--post-high school plans, personal, and background data			
1960	Follow-up of Fall 1959 seniors--basic control data, eventuations, and correlates			
1965	Survey of Fall 1965 seniors--post-high school plans, personal and background data		Survey of Fall 1965 <u>Equality of Educational Opportunity</u> high school seniors--post-high school plans, personal, and background data for over 90,000 students	
1966	First follow-up of Fall 1965 seniors--basic control data, eventuations, and correlates			
1967		All persons in sample 14-34 years of age-- basic control data, educational variables, and correlates		

STUDY FLOW-CHART (continued)

Year of survey	Census CPS High School Seniors	Census CPS Household Sample	Office of Education "Coleman Study"-- High School Seniors	Columbia Researchers' pretest of New York Area High School Student Questionnaires
1968	Second-follow-up of Fall 1965 seniors-- basic control data, eventuations, and correlates	All persons in sample 14-34 years of age-- basic control data, educational variables, and correlates		
1969	Third follow-up of Fall 1965 seniors-- basic control data, eventuations, and correlates	All persons in sample 14-34 years of age-- basic control data, educational variables, and correlates		
1970	Fourth follow-up of Fall 1965 seniors-- basic control data, eventuations, and correlates	All persons in sample 14-34 years of age-- basic control data, educational variables and correlates		Exploratory survey of about 70 students in the four high school grades--control data, personal and background and educational data, attitudes and influences and interests and aspirations
1971	Fifth follow-up of Fall 1965 seniors-- basic control data, eventuations, and correlates			

Appendix B

Findings for the Third or Winter 1969-1970

Follow-Up of the Fall 1965-1966 CPS High School Seniors

Summary of Findings for Third or Winter 1969-1970
Follow-Up Survey of the Fall 1965 High School Seniors

Summary of Findings for Third or Winter 1969-1970

Follow-up Survey of the Fall 1965 High School Seniors

Respondent status in Winter 1969-1970

The 1969-1970 survey obtained information (for those who entered college) on the type of college first entered, as well as the respondent's academic status at the time of the third follow-up interview. In the following table these basic descriptive data are presented:

1969-1970 follow-up status	First college attended (or no college attended)											
	2-year college		4-year college		College unknown		All types of colleges		No college		All respondents	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
High School non-graduate, no college	-	-	-	-	-	-	-	-	43	8	43	4
High school graduate, no college	-	-	-	-	-	-	-	-	499	92	499	43
Graduated from 2-year college only	21	14	-	-	3	12	24	4	-	-	24	2
Now enrolled in 2-year college	18	12	13	3	1	4	32	5	-	-	32	3
Dropped from 2-year college	60	40	7	2	2	8	69	11	-	-	60	6
Graduated from 4-year college	3	2	30	7	1	4	34	6	-	-	34	3
Now enrolled in 4-year college	38	25	276	64	7	28	321	53	-	-	321	28
Dropped from 4-year college	10	7	103	24	11	44	124	21	-	-	124	11
Total	150	100	429	100	25	100	604	100	542	100	1146	100

If we exclude the 43 respondents who had failed to graduate from high school by the time of the third follow-up, and so were not in a position to enter college, 55% of the respondents had attended college, 5% had graduated from some kind of college (2% from a 2-year college and 3% from a 4-year one), 32% were still enrolled in college (3% in a 2-year college and 29% in a 4-year one), and 17% had dropped from college (6% from a 2-year college and 11% from a 4-year one). If we consider 2-year college graduates who failed to transfer on to 4-year schools to be dropouts, the dropout rate was 20%. If we consider only those who had attended college, the dropout rate was either 32% (2-year college graduate non-transfers not included) or 36% (2-year college graduate non-transfers included).

Thirty-four percent of the initial 2-year college entrants had transferred on to a senior institution, but only 5% of the initial 4-year college entrants had transferred to a junior college. Overall, about 12% of the respondents had attended more than one type of school. The dropout rate for all initial 2-year college entrants (not counting as dropouts 2-year graduates who failed to transfer) was 47%, and for initial 4-year entrants 26%. If the 2-year college graduates who failed to transfer are counted as dropouts, dropout for initial 2-year college entrants was 61%, or nearly two and a half times the rate for initial 4-year college entrants.

By the time of the third follow-up graduation, transfer, and dropout in combination meant that only about 9% of those still enrolled in college were enrolled in 2-year schools, whereas 26% reported a 2-year college as the initial institution attended.

In interpreting the statistics we have just cited, a word of caution is in order. Because of selective respondent attrition, we probably interviewed persons in the original sample who were somewhat more likely than those not interviewed to enter college, to enter 4-year colleges, and to persist in college. The proportions cited are only rough approximations of what probably would pertain for the total original sample, had we been able to secure responses for all persons. (See section of this report on respondent attrition.) Nevertheless, the overall patterns are clear, and would not be affected by the moderate selective attrition which occurred.

Only a minority of initial 2-year college entrants transfer to senior schools. Even if all those still enrolled in junior colleges at the time of the second follow-up were to transfer, which is certainly unlikely, the final transfer rate would be less than half. However dropout is defined, and whether the student is classified by the type of college he first entered or the one he finally reached, 2-year college students are by far more prone to drop than 4-year ones. Nearly four years after high school graduation only about one in five of the students who entered a 2-year college initially, and only attended this one type of school, had graduated from a 2-year college. Even if all those who initially entered a 2-year college, and were still enrolled at the time of the third follow-up, were to become 2-year college graduates, the graduation rate would still be less than four students in ten. This last observation is particularly significant, since it has been argued that many college entrants do not aspire to the baccalaureate, but seek the two year Associate of Arts or Sciences degree only. Apparently

most of those with presumably limited academic goals do not achieve these goals. Since sample attrition was skewed towards persons with characteristics associated with high dropout rates, graduation from 2-year colleges is probably even lower than the proportion we report.

The overall dropout rate by 1969-1970 of 36%, in this instance meaning failure to persist in college to the baccalaureate, would seem to be an approximation of what we would expect. Presumably most of those enrolled in college in 1969-1970 were fairly well advanced in their college careers. We would not expect many to drop. If four out of five of those enrolled were to receive their baccalaureates ultimately, then the final dropout rate would be just under half of all college entrants, identical with the long-term historical dropout rate.

These, then, are the basic descriptive findings for the 1969-1970 follow-up survey, providing the basic frame of reference for the additional findings we now turn to for the 1969-1970 follow-up status groups, cross-tabulated by academic, personal, and socio-economic variables.

High School Curriculum and
Winter 1969-1970 Academic Status

High School Curriculum and Winter 1969-1970 Academic Status

Earlier follow-up findings

By the time of the Winter 1968-1969 or second follow-up survey, the 1966 high school graduates who entered college immediately, as the large majority of entrants did, would normally have been juniors in college. Sufficient time had elapsed for a considerable amount of college dropout to have taken place. In our analysis of the second follow-up, then, we were able to relate not only college entrance or failure to enter, and type of college entered for those entering, but also college dropout or continuation, to a number of socio-economic and academic variables presumably associated with the post-high school behavior. By far the most significant finding for this analysis was the fact that the high school curriculum was the strongest determinant of all three types of eventuations--college entrance, type of college entered, and perseverance in college. We documented this finding at length and in detail in a paper included in Appendix C of our last progress report (Jaffe and Adams, "Academic and Socio-Economic Factors related to Entrance and Retention at Two- and Four-Year Colleges in the late 1960's"). By the time of the third follow-up in 1969-1970 the students would normally have been college seniors. A few had already graduated from either 2-year or 4-year colleges. Other students had transferred from 2-year to 4-year colleges. For the first time we were in a position to relate academic and socio-economic variables to college graduation as well as enrollment in college and dropping from college. We were also able to determine whether the very strong relationship between the high school curriculum and post-high school behavior found on the second follow-up still pertained for the third one.

In this section of the report we focus on the high school curricular variable, which appears to remain the strongest predictor of post-high school behavior, if we except the essentially tautological variable of post-high school plans in 1963. The following tables present the statistics on high school curriculum and post-high school behavior. In the detailed table we present the high school curricular distribution for each of the post-high school eventuation groups, rather than the post-high school eventuation distribution for the high school curricular groups. This is because selective sample attrition would chiefly distort the distribution for the post-high school eventuation groups, somewhat understating the proportion of high school seniors failing to enter college, of those entering the proportion entering 2-year colleges, and the proportions dropping from college. Sample attrition appears to have had only slight effects on the curricular distribution, however, as the following statistics indicate:

Proportions who followed the college
preparatory curriculum in high school

All respondents:	
Second follow-up	48
Third follow-up	49
All college entrants:	
Second follow-up	77
Third follow-up	74
All college non-entrants	
Second follow-up	17
Third follow-up	18
All 4-year college students	
Second follow-up	84
Third follow-up	78

Proportions who followed the college
preparatory curriculum in high school (contd)

All 2-year college students:	
Second follow-up	59
Third follow-up	58
All college non-dropouts:	
Second follow-up	85
Third follow-up	81
All college dropouts:	
Second follow-up	60
Third follow-up	59

The largest discrepancy between the two surveys is a somewhat lower proportion of college preparatory 4-year college students and a slightly higher proportion of 2-year ones, on the third follow-up survey. This may well be explained by transfer of 2-year college students to 4-year schools in the course of the year separating the two surveys, rather than selective attrition. Two-year college students are less likely than 4-year ones to have followed college preparatory programs, and by transferring to 4-year schools should lower the 4-year college preparatory proportion. The modest decrease in college preparatory college entrants and non-dropouts may be partially explained by late entrants who would tend to be non-college preparatory students. In general, though certain of the post-high school eventuation groups were particularly strongly affected by sample attrition (see section of this report on sample attrition) the high school curricular distribution for each of these groups does not appear to have been seriously changed, except in the instance where transfer and late entrance might in part explain the change.

Overall, the table simply tells us that the very strong relationship between the high school curriculum and post-high school eventuations which pertained for the second follow-up pertained for the third one as well. The relationship is strongest in both instances, for college entrance or non-entrance, but in both instances it is highly significant for type of college entered and for dropout status.

In the detailed table for the third follow-up survey below, where we ask for the high school program distribution for each of the eventuation groups, including those who had graduated from college, college graduates and those enrolled in college are particularly likely, relative to college dropouts, to have taken college preparatory courses. All of these two groups, but especially the first two, are far more likely than non-entrants to college to have taken college preparatory courses. In all instances 4-year college attendance is more strongly associated with college preparatory work than 2-year college attendance. Indeed those who had dropped from 4-year colleges were about as likely as those attending 2-year colleges to have taken college preparatory programs.

High School Curriculum of All 1965-1966 High School
Seniors Who Graduated from High School by Academic
Status on Third or Winter 1969-1970 Follow-up Survey.

<u>Winter 1969-1970 academic status</u>	High school curriculum				No. of cases
	College preparatory %	General %	All other curricula %	All curricula %	
High school grad, no college	18	47	35	100	485
All college entrants ¹	74	20	6	100	594
All 4-year college entrants	78	16	6	100	471
All 2-year college entrants	58	33	9	100	123
All college grads	78	10	12	100	58
4-year college grad	80	8	12	100	34
2-year college grad only	75	13	12	100	24
All enrolled in college	81	13	6	100	349
Enrolled in 4-year college	84	12	4	100	317
Enrolled in 2-year college	60	31	9	100	32
All college non-dropouts ²	81	13	6	100	407
Attended 4-year college	83	11	6	100	351
Attended 2-year college	66	23	11	100	56
All college dropouts	59	34	7	100	187
Dropped from 4-year college	63	30	7	100	120
Dropped from 2-year college	51	42	7	100	67
All academic eventuations	49	32	19	100	1079

¹Includes those still enrolled, plus graduates and dropouts.

²Includes those still enrolled, plus graduates.

Note: Students are classified by the only or the last college attended.

In the following table, deriving from the third follow-up data, we attempt to summarize the relationship between educational attainment and the high school course of study. The table presents the numbers we would expect to reach various levels of educational attainment, per thousand college preparatory and college non-preparatory high school graduates, about three and a half years following high school graduation:

<u>Educational level</u>	College preparatory students	Non-college preparatory students
	<u>No.</u>	<u>No.</u>
High school seniors	1000	1000
College entrants	830	280
College non-dropouts:	623	142
Enrollees in 2-year colleges	36	24
Graduates from 2-year colleges only	34	11
Enrollees in, or graduates from, 4-year colleges	553	107

Very simply, because of the lesser attrition experienced by the college preparatory students at each stage of the educational progression, they are over five times as likely as the non-college preparatory ones either to have received the baccalaureate, or else to be within striking distance of graduation from a 4-year college.

**Academic Aspirations in High School and
Post-High School Eventuations**

Academic Aspiration in High School and
Post-High School Eventuations

Liberalized access to college and academic motivation

However much access to college were to be liberalized under various more open enrollment programs, the increase in proportions of high school graduates enrolling in college would ultimately depend upon the proportion of graduates who wished to enroll. As we have seen, various personal, academic, and socio-economic variables are strongly related to college entrance or failure to enter, and to a lesser degree, for the entrants, to the type of college entered, and to dropout or continuation in college. To a considerable extent these variables represent objective deterrents or advantages, as the case may be, with respect to college entrance. On the other hand, it is very probable that these variables are also significantly related to the extent of the high school student's academic aspirations. Objective academic and socio-economic barriers to college entrance might be removed, but the less able or more disadvantaged students in many instances might not enter college unless they desired to do so. In the near future we hope to relate post-high school desires of high school seniors to the various socio-economic and academic variables to determine whether or not the desire to enter college is strongly and systematically related to them. In this preliminary analysis we simply relate the post-high school desires to what the students actually did following high school graduation.

The following question on the Winter 1969-1970 follow-up sought to measure the college-going aspirations of the respondents when they were high school students: "Quite apart from practical considerations, did you want to attend college while in high school?" Though we cannot be certain to what extent responses to this question might be colored by after the fact rationalizations of what the respondent had done, nevertheless, even if this were to pertain to an extent, the question should still roughly measure the psychological dimension of academic motivation.

For this question on motivation we can ask two different questions. First, what is the high school aspiration distribution for the various post-high school eventuation groups? Here the eventuations represent the dependent variable, as was the case in our tabulations for academic and socio-economic variables, and the detailed tabulation below follows the same form as most tabulations in earlier sections of this report. The second question we may ask concerns the eventuation or outcome distribution for each of the aspiration groups. Here the eventuations represent the dependent variable, and we present a summary tabulation for this question in the second table below. As we have pointed out earlier, selective sample attrition probably distorts findings appreciably if we percentage across the eventuations groups, whereas percentaging for each outcome group separately probably involves less distortion. But in this instance, we are primarily interested in the overall aspiration-eventuation patterns, rather than with the precise quantities, so we present the summary table in which outcomes represent the dependent variable. Though we probably tended to lose respondents who did not desire college, it would

also seem probable that the post-high school outcomes for all students not desiring college were roughly the same. The two tables follow:

Winter 1969-1970 follow-up response to question: "Quite apart from practical considerations, did you want to attend college while in high school?"

Winter 1969-1970 academic status	Yes, very much	Yes somewhat	Generally indifferent	No	All responses	No. of cases
	%	%	%	%	%	
High school grad, no college	18	36	11	35	100	486
All college entrants: ¹	64	26	6	4	100	596
All 4-year college entrants	67	23	5	5	100	473
All 2-year college entrants	52	36	9	3	100	123
All college graduates:	61	32	2	5	100	57
4-year college graduates	68	26	-	6	100	34
2-year college graduates only	53	39	4	4	100	23
All enrolled in college:	70	20	5	5	100	351
Enrolled in 4-year college	71	19	5	5	100	319
Enrolled in 2-year college	63	25	9	3	100	32
All college non-dropouts ²	69	21	5	5	100	408
Attended 4-year college	71	20	4	5	100	353
Attended 2-year college	58	31	7	4	100	55
All college dropouts:	53	36	7	4	100	188
Dropped from 4-year college	57	33	6	4	100	120
Dropped from 2-year college	47	40	10	3	100	68
All academic eventuations	43	31	8	18	100	1082

¹Includes those still enrolled, plus graduates and dropouts.

²Includes those still enrolled, plus graduates.

Note: Students are classified by the only or last college attended.

Academic Status of High School Graduates

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in Winter 1969-1970

Winter 1969-1970 follow-up response to question: "Quite apart from practical considerations, did you want to attend college while in high school?"	Did not attend college	Attended college, but not still enrolled, and did not compl- ete 4 years	Attended college and still attending, or compl- eted 4 yrs	All eventua- tions	No. of cases
	%	%	%	%	
Yes, very much	18	24	58	100	466
Yes, somewhat	53	23	24	100	330
Generally indifferent	62	17	21	100	89
No	87	4	9	100	197
All responses	45	20	35	100	1082

Findings

Overall, it would seem that about four in ten of the respondents desired college very much as high school students, about three in ten qualified this desire, about one in ten didn't care either way, and about two in ten simply did not want to go to college. Less than two in ten of those who had desired college very much failed to reach college, and less than one in three of the entrants dropped out of college without having completed the baccalaureate program. At the other extreme, nearly nine in ten of those who answered "no" they did not want to go to college in fact failed to enter. Those whose desires for college were qualified and those who did not care either way lay between the two extremes. Just over five in ten and just over six in ten of these two

groups, respectively, failed to enter college. The college-going rate for all respondents (about 55%) is as high as it is simply because nearly half of all the respondents had wanted to enroll very much, and nearly all such students did in fact enroll.

In sum, the desire to enter college, or its absence, appears to be an extremely strong determinant of what the high school student will actually do. Consequently, close appraisal of the correlates of more or less commitment to post-high school study would seem to be imperative for any programs seeking to provide college for increased proportions of the relevant age group.

From the detailed eventuation table we can determine more specifically what levels of post-high school aspiration pre-figured different post-high school outcomes. Less than two in ten of those who failed to enter college had desired college very much. But it is also important to note that over a third of those who failed to reach college had desired college "somewhat." Of those who reached college nearly two-thirds had desired to do so very much. The significant implication is that it is the strength of the motivation that is critical for post-high school behavior, not simply the general pre-disposition pro or con college-going. For the college entrants, 4-year college entrants, as compared to 2-year ones, are characterized by stronger desires for college as high school students, and for those who persevere in college, as compared with those who drop, this same finding pertains. But it appears that post-high school aspirations pre-figure college entrance or failure to enter far more strongly than they pre-figure the differing eventuations of those who enter college. The few students who are not particularly desirous of college, but nevertheless enter, and the many who are very desirous of college and enter, are only moderately different in terms of college entered and perseverance in college.

Implications of the above findings for further research

Given the small size of our sample, we can only cross-tabulate two variables at a time. To carry the above analysis much further, it would be necessary to have enough cases to cross-tabulate three or more variables. For example, it would be important to cross-tabulate college aspiration in high school with post-high school eventuations, controlling simultaneously for academic ability and socio-economic status. It would be desirable to make these tabulations for males and females and whites and non-whites separately. With such complex cross-tabulations, one could determine the independent relationships of aspirations, ability, and socio-economic status to post-high school eventuations for each sex and race group, as well as overall.

Our short analysis here, then, simply presents the strong relationship between earlier aspirations and subsequent behavior, however mediated that relationship may be by other variables, and so provides evidence that further investigation should be undertaken with samples of adequate size.

Additional Personal, Socio-Economic, and Academic Variables
and Winter, 1969-1970, Academic Status

Additional Personal, Socio-Economic, and Academic Variables
and Winter 1969-1970 Academic Status

Introductory remarks

In the previous two sections of this report we discussed at length and in detail two variables, the high school curriculum, and the desire to enter college (or its absence) as a high school student. In this section we introduce seven additional variables, in all instances less associated with entering or not entering college than the two we have considered separately, but in all instances quite closely related to entering or not entering. At the end of this section of the report we present detailed tables for each of the seven additional tables, and the reader may compare these tables with those for the variables in the two preceding sections. Here we principally present and discuss two summary tables below, which respectively relate all nine variables to college entrance or failure to enter, and to perseverance in college.

In the first table we simply compare those who attended college with those who did not attend college for proportions possessing each characteristic associated with entering college (Columns A and B). Column C presents the percent difference in the proportions for those who did and did not attend, representing a measure of the strength of the characteristic's relationship to college entrance. Column D presents the proportion of all respondents possessing each characteristic, an indicator of the relevance of the relationship indicated in Column C. For example, if we compare those who attended

college with those who did not, the percentage differences for the characteristics "white collar head of household" and "father some college or more" are identical, but half again as many of the respondents possessed the former characteristics as possessed the latter, so that far more respondents were in a position to be favorably affected by the former. Column C presents the percentage difference in rank order from largest to smallest difference.

The second table below parallels the first in all particulars, save that here the concern is with college entrants rather than all respondents, and with dropout from, versus perseverance in, college, rather than with college entrance. The rank orders (vertical stubs and Column C) also differ for the two tables.

The essential purpose of these two summary tables, then, is to present rough measures of the absolute and relative relationships of the nine characteristics to college entrance and perseverance in college, representing the two most significant post-high school educational outcomes.

Proportion of Respondents Who Attended College, and of Respondents
Who Did Not Attend College, Possessing Each of Nine Academic, Personal,
and Socio-Economic Characteristics

<u>Respondent characteristics</u>	Respondent's academic status			
	(A) Attended college	(B) Did not attend college	(C) Difference (A-B)	(D) Proportion of all respondents possessing characteristic.
	%	%	%	%
Took college prep program in high school	74	18	56	49
Desired college very much in high school (apart from practical considerations)	64	18	46	43
Never married by Winter 1969- 1970	72	40	32	58
Father some college or more	38	11	27	27
Head of household white collar in Fall 1965	53	26	27	40
Family income \$10,000 or over in Fall 1965	38	15	23	27
High School grade average B- or better	66	45	21	57
Sex is male	54	39	15	47
Age was 16 years or less in Fall 1965	20	13	7	16

Proportion of College Entrants Who Dropped Out of College, and of College Entrants Who Did Not Drop Out of College, Possessing Each of Nine Academic, Personal, and Socio-Economic Characteristics

<u>College entrant characteristic</u>	Respondent's academic status			
	(A) Did not drop out of college	(B) Dropped out of college	(C) Difference (A-B)	(D) Proportion of college entrants possessing characteristics
	%	%	%	%
Never married by Winter 1969-1970	81	53	28	72
Took college prep program in high school	81	59	22	74
High school grade average B- or better	73	51	22	66
Desired college very much in high school (apart from practical considerations)	69	53	16	64
Head of household white collar in Fall 1965	56	45	11	53
Father some college or more	40	33	7	38
Family income \$10,000 or over in Fall 1965	40	34	6	38
Age was 16 years or less in Fall 1965	21	17	4	20
Sex is male	54	53	1	54

Note: In this table college entrants who graduated from a 2-year college, but did not continue at a 4-year one, are classified as non-dropouts, on the assumption that most had probably fulfilled their original intentions. Non-dropouts, then, include all 2-year and 4-year college graduates, plus students still attending college in Winter 1969-1970.

Findings

If we compare Columns C and D for the two tables, it is clear that the major academic "sort" takes place at the point of college entrance (or failure to enter), rather than following entrance. The proportion possessing characteristics favorable both to college entrance and perseverance in college is in every instance higher for the college entrants than for all the high school graduates (Column D of the two tables). But the central point is that in all except one instance (a favorable high school grade) the characteristics are less significant for perseverance in college than for entrance (as measured by the differences in size of the proportions in Column C of the two tables).

The rank order of importance of the characteristics changes somewhat for the two tables (Column C and vertical stubs for the two tables). A favorable high school grade, and being unmarried rank higher in importance for perseverance in college (rank order two and one) than for college entrance (rank order seven and three). The college prep curriculum and desiring college rank lower for perseverance (rank order two and three) than for entrance (rank order one and two). "Father some college or more" ranks lower (sixth) for perseverance than for entrance (third). Sex seems to sort the college entrants from the non-entrants appreciably, but does not differentiate those who persevere and those who do not persevere in college at all. Family income does not rank high on either table. The three characteristics which rank high on both tables, and which discriminate strongly between the outcome categories on both tables in an absolute sense, are the college prep curriculum, desiring college in high school, and being unmarried.

Here we will not attempt to speculate on the causes for the relationships, and changes in relationships for the two tables, which we have just described. We have no idea, for example, whether being unmarried leads to persevering in college, or whether persevering in college leads to being unmarried. Perhaps both possibilities are relevant. To explain the relationships we have described we would need both a larger sample and survey data in depth.

We have limited the summary tabulations and comment to college entrance and perseverance in college. If the reader so wishes, the detailed tables which follow permit extension of this analysis to senior versus junior college entrance and to more detailed analysis of status for the college entrants (graduated college, still enrolled, dropped from 2-year college, dropped from 4-year college, etc.)

Personal, Academic, and Socio-Economic Characteristics
of All 1965-1966 High School Seniors Who Graduated from
High School by Academic Status on Third or Winter 1969-
1970 Follow-Up Survey

<u>Winter 1969-1970 academic status</u>	Sex of Student			No. of cases
	Male %	Female %	Both sexes %	
High school graduation, no college	39	61	100	498
All college entrants: ¹	54	46	100	600
All 4-year college entrants	54	46	100	475
All 2-year college entrants	53	47	100	125
All college graduates:	34	66	100	58
4-year college graduates	41	59	100	34
2-year college graduates only	25	75	100	24
All enrolled in college:	58	42	100	350
Enrolled in 4-year college	58	42	100	318
Enrolled in 2-year college	59	41	100	32
All college non-dropouts: ²	54	46	100	408
Attended 4-year college	56	44	100	352
Attended 2-year college	45	55	100	56
All college dropouts:	53	47	100	192
Dropped from 4-year college	50	50	100	123
Dropped from 2-year college	59	4	100	69
All academic eventuations	47	53	100	1098

¹Includes those still enrolled, plus graduates and dropouts.

²Includes those still enrolled, plus graduates.

Note: Students are classified by the only or last college attended.

Student's age, Fall 1965

Winter 1969-1970 academic status	16 years or under %	17 years %	18 years or over %	All ages %	No. of cases
High school graduate, no college	13	66	21	100	497
All college entrants: ¹	20	72	8	100	601
All 4-year college entrants	20	74	6	100	476
All 2-year college entrants	18	65	17	100	125
All college graduates:	21	64	15	100	58
4-year college graduates	24	70	6	100	34
2-year college graduates only	17	54	29	100	24
All enrolled in college:	21	74	5	100	351
Enrolled in 4-year college	21	74	5	100	319
Enrolled in 2-year college	19	69	12	100	32
All college non-dropouts: ²	21	73	6	100	409
Attended 4-year college	21	74	5	100	353
Attended 2-year college	18	63	19	100	56
All college dropouts:	17	72	11	100	192
Dropped from 4-year college	16	75	9	100	123
Dropped from 2-year college	17	67	16	100	69
All academic eventuations	16	70	14	100	1098

¹Includes those still enrolled, plus graduates and dropouts.

²Includes those still enrolled, plus graduates.

Note: Students are classified by the only or last college attended.

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Marital status of student

Winter 1969-1970 academic status	Married %	Never married %	Both statuses %	No. of cases
High school graduate, no college	60	40	100	499
All college entrants: ¹	28	72	100	603
All 4-year college entrants	24	76	100	478
All 2-year college entrants	44	56	100	125
All college graduates:	40	60	100	58
4-year college graduates	32	68	100	34
2-year college graduates only	50	50	100	24
All enrolled in college:	16	84	100	353
Enrolled in 4-year college	15	85	100	321
Enrolled in 2-year college	31	69	100	32
All college non-dropouts: ²	19	81	100	411
Attended 4-year college	16	84	100	355
Attended 2-year college	39	61	100	56
All college dropouts:	47	53	100	192
Dropped from 4-year college	47	53	100	123
Dropped from 2-year college	48	52	100	69
All academic eventuations	42	58	100	1102

¹Includes those still enrolled, plus graduates and dropouts.

²Includes those still enrolled, plus graduates.

Note: Students are classified by the only or last college attended.

<u>Winter 1969-1970 academic status</u>	Student's average high school grade			No. of cases
	B- or better %	C+ or worse %	All grades %	
High school graduate, no college	45	55	100	469
All college entrants: ¹	66	34	100	584
All 4-year college entrants	71	29	100	463
All 2-year college entrants	48	52	100	121
All college graduates:	79	21	100	56
4-year college graduates	88	12	100	33
2-year college graduates only	65	35	100	23
All enrolled in college:	72	28	100	341
Enrolled in 4-year college	74	26	100	310
Enrolled in 2-year college	55	45	100	31
All college non-dropouts: ²	73	27	100	397
Attended 4-year college	75	25	100	343
Attended 2-year college	59	41	100	54
All college dropouts:	51	49	100	187
Dropped from 4-year college	58	42	100	120
Dropped from 2-year college	39	61	100	67
All academic eventuations	57	43	100	1053

¹Includes those still enrolled, plus graduates and dropouts.

²Includes those still enrolled, plus graduates.

Note: Students are classified by the only or last college attended.

1965 family income of student

Winter 1969-1970 academic status	Under \$6000 %	\$6000- 9999 %	\$10,000 & over %	All incomes %	No. of cases
High school graduate, no college	49	36	15	100	476
All college entrants: ¹	25	37	38	100	551
All 4-year college entrants	23	37	40	100	437
All 2-year college entrants	32	36	32	100	114
All college graduates:	27	37	36	100	52
4-year college graduates	30	20	50	100	30
2-year college graduates only	23	59	18	100	22
All enrolled in college:	22	38	40	100	327
Enrolled in 4-year college	21	39	40	100	297
Enrolled in 2-year college	30	30	40	100	30
All college non-dropouts: ²	22	38	40	100	379
Attended 4-year college	22	37	41	100	327
Attended 2-year college	27	42	31	100	52
All college dropouts:	31	35	34	100	172
Dropped from 4-year college	28	37	35	100	110
Dropped from 2-year college	35	31	34	100	62
All academic eventuations	36	37	27	100	1027

¹Includes those still enrolled, plus graduates and dropouts.

²Includes those still enrolled, plus graduates.

Note: Students are classified by the only or last college attended.

Winter 1969-1970 academic status	Occupation of head of student's household			No. of cases
	White collar %	All other %	All occupations %	
High school graduate, no college	26	74	100	494
All college entrants: ¹	53	47	100	596
All 4-year college entrants	56	44	100	472
All 2-year college entrants	41	59	100	124
All college graduates:	43	57	100	58
4-year college graduates	50	50	100	34
2-year college graduates only	33	67	100	24
All enrolled in college:	59	41	100	347
Enrolled in 4-year college	60	40	100	315
Enrolled in 2-year college	47	53	100	32
All college non-dropouts: ²	56	44	100	405
Attended 4-year college	59	41	100	349
Attended 2-year college	41	59	100	56
All college dropouts:	45	55	100	191
Dropped from 4-year college	47	53	100	123
Dropped from 2-year college	41	59	100	68
All academic eventuations	40	60	100	1090

¹Includes those still enrolled, plus graduates and dropouts.

²Includes those still enrolled, plus graduates.

Note: Students are classified by the only or last college attended

<u>Winter 1969-1970 academic status</u>	Educational attainment of student's father					No. of cases
	Less than 12 grades	12 grades	1-3 years of college	4 or more years of college	All levels	
	%	%	%	%	%	
High school graduate, no college	62	27	7	4	100	442
All college entrants: ¹	28	34	15	23	100	546
All 4-year college entrants	27	34	13	25	100	429
All 2-year college entrants	34	32	20	14	100	117
All college graduates:	32	37	22	9	100	54
4-year college graduates	25	50	9	16	100	32
2-year college graduates only	41	18	41	-	100	22
All enrolled in college:	25	34	11	30	100	314
Enrolled in 4-year college	24	34	11	31	100	285
Enrolled in 2-year college	24	41	14	21	100	29
All college non-dropouts: ²	25	35	13	27	100	368
Attended 4-year college	25	35	11	29	100	317
Attended 2-year college	31	31	26	12	100	51
All college dropouts:	35	32	18	15	100	178
Dropped from 4-year college	34	31	20	15	100	112
Dropped from 2-year college	37	33	15	15	100	66
All academic eventuations	43	31	12	14	100	988

¹Includes those still enrolled, plus graduates and dropouts.

²Includes those still enrolled, plus graduates.

Note: Students are classified by the only or last college attended.

**Parental Academic Expectations for the Fall 1965 High School Seniors,
Post-High School Guidance Counselling, and Eventuations by Winter
1969-1970**

**Parental Academic Expectations for the Fall 1965 High School Seniors,
Post-High School Guidance Counselling, and Eventuations by Winter
1969-1970**

In Fall 1965 each high school senior's parent or guardian was asked to indicate the level of educational attainment which he or she expected for the senior. On the Winter 1969-1970 follow-up survey each respondent was asked what post-high school advice he or she had received as a high school student. In the following table we have summarized the responses to these two questions:

**Academic status of high school graduates in
Winter 1969-1970**

<u>Post-high school expectations of parent or guardian for high school senior in Fall 1965</u>	<u>Did not attend college</u>	<u>Attended college, but not still enrolled, and did not complete 4 years</u>	<u>Attended college and still attending, or completed 4 years</u>	<u>All eventuations</u>	<u>No. of cases</u>
	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
No college	92	4	4	100	293
1-3 years of college	53	28	19	100	221
4 or more years of college	14	26	60	100	495
All expectations	45	20	35	100	1009
 <u>Advice offered to high school student by teacher or guidance counselor</u>					
To enter college	31	24	45	100	610
Not to enter college	61	14	25	100	36
Student received no advice	62	14	24	100	420
All counselling	45	20	35	100	1066

One could plausibly think of parental expectations for children as either simple predictions of the future, or as influences upon the children's future behavior. Probably both approaches are relevant. Whatever the case may be in this regard, parents seem to be extremely accurate in their forecast for children who in fact will not have entered college some three and a half years following high school graduation. Over nine in ten not expected to reach college in fact fail to enter. If the parents expect their children to obtain baccalaureates, some six in seven will at least enter college, and about seven in ten of the entrants will either have completed four years, or else be still enrolled in college. Parents who expect part college for children are apt to be disappointed. Just over half of these children fail to enter college.

Overall, about seven in ten parents expect their children to attend college (at least for a time) and only between five and six in ten actually do so. The discrepancy is largely attributable to the mistaken expectations of many parents anticipating one to three years of college for their children. We suspect that this finding is simply one more piece of evidence, to be added to the many from this study, indicating that high school graduates who fail to enter college, and those who aspire to or experience a limited stay in college, considerably resemble each other for many characteristics, whereas the student who perseveres in college differs greatly from the other two groups.

According to Winter 1969-1970 follow-up respondents, nearly six in ten recalled high school counselling in favor of going to college. Only a handful (3%) were advised not to go to college. The remaining four in ten simply could not recall any advice pro or con college. Those advised to enter college

were about twice as likely to do so as the other two groups, and about two-thirds of the entrants were still enrolled or had graduated from a 4-year school by Winter 1969-1970. About seven in ten of those advised to enter college actually did enter, whereas only four in ten of those advised not to enter, and of those who received no advice, had attended three and a half years following high school graduation. Nevertheless, it is quite impressive that four in ten of the half of all respondents not encouraged to enter college did in fact enter. Only about a third of these entrants had dropped out by Winter 1969-1970 without receiving their baccalaureates. Overall, about three in ten of the college entrants were students who recalled no advice pro or con college in high school, or else, in a few instances, were specifically advised not to enter.

Notes on Respondent Attrition

A year ago, on our last progress report, we concluded with a few notes on sample attrition, or students lost to the longitudinal study through the second or Winter 1968-1969 follow-up survey. In the present progress report for the third follow-up survey (Winter 1969-1970) we are examining such attrition more closely. By 1969-1970 net attrition appeared to be about 25 percent of the total original sample of 1965-1966 high school seniors. Since this loss is great enough to bias findings considerably, it seems important to describe as fully as possible the characteristics of the lost respondents, so as to determine the probable kinds, directions, and extent of biases. This is not only important for interpretation of findings presented elsewhere in this progress report, but also should afford others undertaking similar longitudinal efforts involving students some insights into the numbers and kinds of students they might expect to lose over the years. With such insights, special efforts could be made to retain the kinds of students most likely to be lost. We should point out that no special efforts of this sort have been made on this study to date, and that attempts to locate respondents, though considerable, could have been far more intensive if funding had permitted. We assume that the attrition rate could have been considerably lessened by carefully pre-planned intensive pursuit of those most likely to be lost, had we clearly known their identifying characteristics beforehand. Finally, since we did not know at the time of the first follow-up survey that we would be doing subsequent ones, we failed to

obtain from the respondents on the first follow-up the names and addresses of "two persons who will always know where you are," information we requested on subsequent follow-ups. Had we done so, sample attrition on the second follow-up survey would no doubt have been substantially lessened.

Gross attrition

The following table summarizes gross sample attrition between the initial survey of the October 1965 high school seniors and the third follow-up of these seniors in Winter 1969-1970:

	Gross Sample Attrition	
	<u>No.</u>	<u>Percent</u>
Original sample	1582	100
Lost to 1st follow-up in Fall 1966*	112	7
Lost to 2nd follow-up in Winter 1968-1969	138	9
Lost to 3rd follow-up in Winter 1969-1970	186	12
Total lost	436	28
Total retained	1146	72

*Some of these individuals were not interviewed on the October 1965 survey of high school seniors, as well as the first follow-up, but in such instances much was learned about the seniors from parent or guardian and high school principal interviews.

Net attrition

The net attrition, however, is somewhat lower when estimated deaths and students found to be out of the scope of the study (such as foreign students) are removed both from the total original sample and from the total of students lost to the study:

Net Sample Attrition

	<u>No.</u>	<u>Percent</u>
Estimated original sample	1522	100
Estimated total lost	376	25
Total retained	1146	75

For the sample age-group, life tables indicate that mortality should be about three-quarters of a percent per year for each of the four years (plus a few months) between the time of the initial and third follow-up surveys. To the fifty or so lost students who accordingly would have died we added ten lost students who were definitely known to be out of the scope of the survey. For nearly nine in ten individuals lost to the survey (after the estimated deaths and those known to be out of scope are subtracted from the gross total loss) we have no information on the specific reason for loss. Presumably a few of these individuals are also out of the scope of the survey and our true loss may well be slightly lower than the adjusted estimate of 25 percent. Just under two dozen of the lost respondents were known to be in the Armed Forces, and just under two dozen were outright refusals. Presumably a considerably larger number would fall into these two categories if we had information on reason for loss for all the lost individuals. Information on reason for loss is scanty simply because the large majority of those lost could not be located at all.

Attrition in other studies

Compared with most longitudinal studies of students our 25 percent respondent attrition over a period of slightly over four years is a very modest loss. For example, of 28,800 students taking the National Merit

Scholarship Qualifying Test in Spring 1967 who were followed-up two and a half years later in Fall 1969 only 40 percent returned usable information. As for our study, non-viable addresses appear to account for a large part of the 60 percent attrition.^{1/}

In another recent study, 16,982 June 1969 New York City high school juniors were followed-up about a year and a half later. Questionnaires were returned by 8,123 students, or about 48% of the sample. In this instance it was possible to weight the returns in an attempt to eliminate major biases, since a number of characteristics for the sample universe were known. The rather elaborate weighting procedures, however, seem to have been only partially successful, as the report of the study candidly admits.^{2/} It would seem that weighting itself introduced distortion, presumably because the distributions in the individual cells of the weighting tables were themselves not representative of the sample universe for variables other than the criterion weighting ones.

Who are the students we lost?

We are fortunate, then, that our sample attrition over a relatively long span of time has been far less than is the case in many other longitudinal studies of students. Nevertheless, even a 25 percent loss could lead to considerable distortion in follow-up data, if the lost respondents were

^{1/}Donivan J. Watley, Black and Nonblack Youth: Finances and College Attendance, National Merit Scholarship Corporation, Research Reports, Volume 7, Number 6, pp.5,6, Evanston, Ill., 1971.

^{2/}Robert Birnbaum and Joseph Goldman, The Graduates: A Follow-up Study of New York City High School Graduates of 1970, The City University of New York, Office for Research in Higher Education, pp. 1,2, New York, N.Y., 1971.

systematically and significantly different from those retained. For many, though not all, of the lost respondents we have considerable personal and background data obtained in Fall 1965, either from the student himself or herself, or else from the student's parent or guardian. We have this same data for the overwhelming majority of the students retained through the third follow-up in Winter 1969-1970. In the following tables we report for students interviewed and students not interviewed, in order to roughly determine the relative distributions for seven key variables. For all seven variables we have data for 73 percent or more of the lost respondents.

Personal Characteristics

Interview status on third follow-up

	<u>No interview</u>	<u>Interview</u>	<u>Total</u>
Sex:	%	%	%
Male	57	47	50
Female	43	53	50
Total	100	100	100
No. of cases	319	1141	1460
Race:			
White	83	92	90
All other	17	8	10
Total	100	100	100
No. of cases	319	1141	1460
Age in Fall, 1965:			
16 years or less	14	16	16
17 years	60	69	66
18 years or over	26	15	18
Total	100	100	100
No. of cases	319	1141	1460

Very briefly, the individuals lost to the sample compared to those interviewed, have a significant tendency to be men, to be non-whites, and to be older. The latter two of these characteristics (for those who were interviewed) are ones that are associated with failure to enter college, but

the first one is associated with entering college. We simply infer that men tended to be lost to the sample because many enter the Armed Forces and are lost track of. It is also true that older college entrants have a strong tendency to attend 2-year rather than 4-year institutions. Just under half, or over twice the proportion of older seniors who entered college (18 years and over) as of younger ones (17 years or less) attended junior colleges. Finally, the older entrants were nearly twice as likely to drop from college as the younger ones. Nearly equal proportions of men and women entered 2-year versus 4-year colleges, but women were slightly more likely to drop from college. There are too few cases of non-white college entrants to relate race to college entrance patterns.

Background Characteristics

Interview status on third follow-up

<u>Occupation of household head as of Fall 1965</u>	<u>No interview</u> %	<u>Interview</u> %	<u>Total</u> %
White collar	34	40	38
All other	66	60	62
Total	100	100	100
No. of cases	429	1133	1562

Family income as of Fall 1965

Under \$6,000	47	36	39
\$6,000-9,999	33	37	36
\$10,000 & over	20	27	25
Total	100	100	100
No. of cases	400	1066	1466

Educational attainment of the Fall 1965 high school senior's father

Less than 12 grades	51	44	46
12 grades	26	31	29
1-3 years of college	11	11	11
4 or more years of college	12	14	14
Total	100	100	100
No. of cases	364	1023	1387

The background variables in the table all derive from the October 1965 interview with the high school senior's parent or guardian.

The three background variables tell a consistent story. Students lost to the survey simply tend to be lower socio-economic ones, whatever the measure of socio-economic status. Though the strength of the relationship varies for the three socio-economic measures, for all three measures lower socio-economic status (characterizing the lost respondents) is associated (once again for those who were interviewed) with failure to enter college, with entering a 2-year rather than a 4-year college, and with dropping from college. With the exception of the sex variable (and here we suspect that the explanation lies in respondent loss for men entering the Armed Forces) the personal and background variables are also consistent. For both sets of variables, by and large, lost respondents have characteristics associated with lesser educational attainment. The final table we will present seems to indicate that for the lost respondents, as compared with those interviewed, this lesser educational attainment was pre-figured in the expectation of the parent or guardian for the senior in Fall 1965.

Academic expectations of parent or guardian for high school senior in Fall 1965	Interview status on third follow-up		
	No interview	Interview	Total
	%	%	%
Complete no more than 12th grade	39	30	32
Complete 1-3 years of college	26	22	23
Complete 4 or more years of college	35	48	45
Total	100	100	100
No. of cases	377	1046	1423

The lost respondents are ones for whom parental educational expectations as high school seniors were relatively modest, and for whom expectations for completion of the full four years of college were particularly low.

Summary of the above

The characteristics of the lost respondents we have presented and discussed are ones associated with not entering college, with entering a 2-year rather than a 4-year college, and with dropping out of college. The proportion of the original sample lost is not so great, however, nor the systematic bias so strong, as to hopelessly distort the 1969 follow-up findings. The proportion entering college and the proportion entering 4-year colleges, are probably a few percentage points too high. The proportion dropping from college (and especially 2-year college) is probably somewhat low. In a purely descriptive sense, of course, the 1969 follow-up somewhat over-represents the upper socio-economic individuals in the original sample.

A closer look at the effects of attrition

Let us take a closer look at possible distortions due to respondent attrition. Let us compare the proportions who had enrolled in college according to the 1966 (or first) and 1969 (or third) follow-up surveys:

	Survey	
Post-high school behavior	1966 %	1969 %
Attended college	44	52
Did not attend college	56	48
Total	100	100
No. of cases	1425	1121

Some of the apparent eight point increase in college attendance is no doubt accounted for by late entrants, but some of it is no doubt accounted for by the tendency to retain those likely to attend college, and to lose those unlikely to do so, on later follow-ups. We hope to pinpoint the relative importance of the two explanations for the apparent increase in college attendance over time by determining just how many of those who attended college according to the 1969 survey entered college subsequent to the 1966 one, and so represent legitimate increments to the college-going population. Pending this tabulation, however, we can determine somewhat more closely the effects of respondent loss on apparent proportions entering 2-year and 4-year colleges.

For the 1966 high school graduates followed-up in Fall 1966, those who reported college attendance were reporting upon the first college attended. The 1969 follow-up also asked for the first college attended. Presumably the distribution by type of college should be identical, possibly save for minor differences deriving from the small number of persons who entered their first college subsequent to Fall 1966, and may not have followed precisely the same enrollment pattern by type of college as the early entrants. The two distributions, however, are far from identical, as follows:

Type of College First Attended According to
1966 and 1969 Surveys

Type of <u>college</u>	Survey			
	1966		1969	
	No.	%	No.	%
2-year	206	33	150	26
4-year	424	67	429	74
Total	630	100	579	100

The change in the proportions between the two surveys is explained by the fact that most of the overall sample loss was attributable to loss of 2-year college entrants. In spite of sample loss, the number of 4-year entrants remained about the same. Presumably the 1966 proportions reported in the table are the more valid ones. Presumably also, the 1969 sample of 4-year college entrants is a reasonably sound one.

The chief effect of attrition, then, would seem to be that we cannot accept the rates or percentages on the 1969 follow-up as precise statistics, especially in the case of 2-year colleges. The major findings, however, when we compare 2-year and 4-year college students, or consider trends over time, for each of the two types of colleges, seem to be clear and incontrovertible since the percentage differences in most instances are large ones, as well as consistent ones, and the observed differences would be increased rather than decreased, by the kind of attrition-derived bias we have described. The following table illustrates these points. We compare dropout rates from 2-year and 4-year colleges for the 1968 and 1969 follow-ups. One hundred eighty six respondents interviewed on the early survey (the first follow-up with sufficient dropouts for meaningful analysis) were lost to the later one. We present dropout rates separately for dropouts defined in two different ways, and separately for students classified by type of college in two different ways.

Dropout rates for students classified by...

	...first or only college attended		...last or only college attended	
	2-year college dropout	4-year college dropout	2-year college dropout	4-year college dropout
1968 survey*	.55	.22	.64	.21
1969 survey*	.61	.26	.74	.25
1968 survey**	.46	.22	.53	.21
1969 survey**	.47	.26	.56	.25

*Dropouts are here defined as students who attended college, are not currently enrolled, and have not graduated from a 4-year college.

**Dropouts are here defined as students who attended college, are not currently enrolled, and have neither graduated from a 2-year nor a 4-year college. Here we give the 2-year graduate who fails to transfer to a senior college credit for achieving his presumed academic goal.

Whatever the definitions used, dropout apparently increases over time, and this tendency is sufficiently strong so that it overrides the presumed effects of sample attrition between 1968 and 1969. Especially for the 2-year college students, the students retained in the sample were those least likely to drop, and the increase in dropout is probably somewhat greater than the above table indicates. Whatever the definitions used, differences between 2-year and 4-year dropout rates are massive ones, and would presumably be somewhat more massive if selective attrition to the sample had not occurred.

Conclusions

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In sum, we feel that the statistics for the 1969 follow-up we present elsewhere in this report are reasonably reliable for 4-year college entrants, but far less reliable for 2-year ones. We would not take the apparent dropout rate for 2-year college students on the 1969 survey at face value, but would accept the rate for 4-year college students as an approximation of the reality.

For other variables discussed in this report, such as influences upon and reasons for the student's program choice when in high school, we would place similar confidence in statistics for the 4-year college students, but would bear in mind that the statistics for the 2-year ones would tend somewhat to represent findings for the most academically persistent members of this group, those who tended to be retained in the 1969 survey. We feel that differences between groups of students are real ones, but would be somewhat greater if respondent attrition had not occurred.

Perhaps the chief value of the rather detailed analysis of respondent attrition we have made is not its value for interpretation of our own 1969 findings, but rather the considerable grounds for skepticism it affords regarding findings from other longitudinal student studies where attrition rates are substantially higher than ours. The considerable bias introduced by our 25% respondent loss would certainly be compounded in studies where attrition reached a third or more of the original sample, as so often has been the case.

Appendix C

**Findings for the 1967, 1968, 1969, and 1970
Current Population Survey Computer Tapes**

College Entrance Rates, 1960-1970

College Entrance Rates, 1960-1970

Since the late 1950's a number of higher educational developments in combination have liberalized access to college for high school graduates, and especially lower socio-economic ones and less academically able graduates. Federal Student Loans, Work-Study, and more recently Educational Opportunity Grants became available for college students with limited incomes. Veterans once again enjoyed higher educational assistance. And the mounting numbers of inexpensive commuter 2-year public colleges with academically liberal admissions policies presumably should have led to rising college entrance rates.

In an earlier report of the present study (Jaffe and Adams, American Higher Education in Transition, Bureau of Applied Social Research, Columbia University, New York, 1969, ERIC ED 03005) Current Population Survey data on high school seniors in 1959 and 1965 indicated that proportions planning on college rose significantly between the two dates, and especially so for lower socio-economic seniors. Earlier survey data indicated that no parallel lessening of the socio-economic gap in higher educational aspirations occurred between the late 1930's and late 1950's. One year follow-ups of the Fall 1959 and Fall 1965 CPS high school seniors indicated that the rise in college-going aspirations was paralleled by a significant, but somewhat slighter, rise in the proportions of high school graduates entering college immediately (the same calendar year as graduation). With special CPS tapes for Fall 1967 through Fall 1970 it is now possible to extend the college-going trend analysis for another four years. In this section of

the report we do just this, limiting the analysis to the proportions of male and female high school graduates entering college the same calendar year as the one in which they graduated from high school.

The trend data are extremely relevant today, as programs and policies aimed at liberalizing entrance to college for all aspirants, and especially for racial minority ones and lower socio-economic ones, continue apace. Such major innovations as the City University of New York's open enrollment program, initiated in Fall 1970, could have a major impact upon college-going rates.

There would seem to be three principal possibilities for trends in college-going: 1) That liberalized access to college would lead to steadily increasing proportions entering college until the large majority of all high school graduates entered college. This would duplicate the earlier trends in high school entrance, and somewhat more recent ones in high school graduation; 2) That the college-going rate would rise with increasing opportunity to enroll, but that the rise would level off at some point--presumably when all those who desired college and looked forward to the later-life benefits of college were in fact entering; and 3) That college-going rates are cyclical, so that rising entrance rates over a period of time are followed by declining ones. The precedent for this latter assumption would seem to be the high proportions of high school graduates entering college in the late 19th and early 20th centuries, followed by lower proportions in the 1930's and 1940's, and finally the rising proportions in the post-World War II period. Which of these three assumptions one favors would in considerable measure determine one's approach to future higher educational policies and programs.

With this preamble we present the relevant CPS data on proportions entering college immediately, 1960-1970. We should note that the immediate college entrants are the most significant group of entrants. Over half of all male 1970 high school graduates entered college that same year. Just under half of the female graduates entered college immediately. But only five percent of the men, and three percent of the women, who had graduated from high school one to four years prior to 1970 entered college that year.

Proportion of High School Graduates Who
Entered College the Same Calendar Year
As the One in which They Graduated from
High School

<u>Sex</u>	1960	1966	1967	1968	1969	1970
Male	46	52	56	60	56	55
Female	38	42	44	46	44	48
Male vs. female percent difference	8	10	12	14	12	7

What the table seems to document is a steady and considerable rise in the college-going rate for both men and women between 1960 and 1968. For men this rise is followed by declines in both 1969 and 1970. For women the rise is interrupted by a decline in 1969 and then resumes in 1970.

It is not at all clear just how seriously one should take the apparent change in the earlier trend, or at least the apparent interruption in the trend, in the most recent years. Sampling variability could explain a great deal of the apparent change. Temporary situations, such as the recent decline in the economy, and for men changes in the draft situation, could explain a great deal. Campus violence may have had a temporary effect

on higher educational aspirations. In spite of all this, however, the data do not support the assumption that the college-going rate is rising in an uninterrupted linear fashion. The data suggest the strong possibility that a plateau in college-going may have been reached by the late 1960's, and especially so for men. Women may be in the process of catching up with the higher college-going rate of the men. Extension of the time series into the 1970's will answer these questions. For the present, however, we suggest that we should not take for granted that the college-going rate will continue to rise in the years immediately ahead.

**Duration of College Attendance and
Objective Benefits of Attendance**

Introductory remarks

In the progress report for the previous reporting period, June 1969 through August 1970, a formal paper, "Academic and Socio-Economic Factors Related to Entrance and Retention at Two- and Four-Year Colleges in the Late 1960's," was included in Appendix C. The data for this paper, presented at the annual meetings of the American Statistical Association in Detroit in late December, 1970, and later published in the Proceedings of the Association for 1970 in a condensed form, presented an analyzed data from the second or Winter 1968-1969 CPS follow-up of the 1965-1966 high school seniors. Mimeo copies of the full paper are available. The essential findings related to high college dropout rates for students with unfavorable socio-economic and academic characteristics, and especially for students who failed to follow the college preparatory curriculum in high school. Whatever the student characteristics, within two years following entrance, dropout was especially high (nearly two-thirds of the entrants) at "open-door" 2-year colleges. The possession of unfavorable characteristics simply raised the high overall dropout rate appreciably higher.

The questions raised by the findings, discussed in the final section of the paper, were the problematical value of the part-college experience in later life, the possible adverse psychological effects of academic failure upon the dropouts, and the increasing relevance of these questions as various "open enrollment" policies and programs seek to reach ever mounting numbers of students with characteristics associated with high dropout rates.

During the past year, using data from the 1967, 1968, and 1969 Current Population Survey tapes obtained for the present study, we were able to pursue this topic of the "payoff" from various lengths of college attendance somewhat further, and to support some of the inferences from the 1968-1969 follow-up data with some direct evidence on objective benefits. The essential findings from the CPS data, plus other relevant data, will appear in a paper prepared for the October 1971 annual meetings of the American Council on Education (Jaffe and Adams, "Two Models of Open Enrollment,"). Since the paper will not be available in printed form prior to the October meetings, we are reviewing the data and findings here. The relevant data are as follows:

1. State data on California student attrition from high school through college graduation in the late 1960's.
2. State data on trends in attrition in California over the decade of the 1960's. Combining the findings for items 1 and 2 affords an overview of attrition in the state which pioneered "differential access open enrollment," and still accounts for a very large proportion of all "open door" 2-year public colleges and students enrolled therein.
3. Roughly parallel CPS data on student attrition in the late 1960's for the nine Census divisions (including the Pacific division). California accounts for about 75% of the college age cohort in the Pacific division, and if we add the State of Washington to California (Washington has a highly developed public higher educational complex, including numerous liberal access 2-year colleges) we have accounted for about 90% of the college age cohort in the Pacific division. Data for the Pacific division principally reflect the California and Washington experiences.

4. Trends in higher educational attrition for the nine Census divisions (once again including the Pacific Division) from an age cohort analysis of the CPS data. The trends may be traced from the latter 1940's through the mid- to latter-1960's. Delay in college entrance and delayed progress through college do not permit analysis of age cohorts below the 25-29 year age group. Items 1 through 4 in combination enable us to compare recent attrition, and trends in attrition, for California or, alternatively, for the Pacific division, and for the nation as a whole--as well as for divisions where open enrollment programs have not been initiated as yet.

5. The CPS tapes finally afford us national data on the early occupational experience of younger persons who had reached various levels of educational attainment from high school through college graduation. Using Decennial Census data on income by occupation we were able to impute income levels to the various attainment groups, according to their differential occupational outcomes. This attainment-occupation-income data permitted us to measure the income benefit from various levels of educational attainment, and to relate these benefits to the national and divisional attainment distributions--and to areas such as California and the Pacific division, where liberal access to college is very prominent, versus other areas where access is far more limited.

Regarding the CPS data, we should mention that the statistics are for the 1967, 1968, and 1969 surveys combined, which afforded sufficient numbers of cases for the divisional analysis. We now turn to the data and the findings.

Basic trends in educational attainment

Let us first establish the basic frame of reference, trends in college attendance and college attrition, deriving from the CPS data. We quote from the final section of "Two Models of Open Enrollment":

"For the nation as a whole, and for men and women alike, proportions of the relevant age cohort attending college for a year or more nearly doubled between the immediate post-World War II years and the latter 1960's. For example, for white males the proportion rose from 30 to 52 percent. For white females the equivalent rise was 20 to 36 percent. In the Pacific division 56 percent of white males in the relevant age cohort enjoyed a year or more of college by the latter 1960's, or slightly more than was the case nationally. But the point to be made is that more open enrollment has been increasing throughout the country, not simply in locales where formally codified programs foster "openness."

"On the other hand, over this same time span the proportion of college entrants completing college appears to have decreased. This is the case nationally, but especially so for the Pacific division. For example, for the Pacific division the proportion of white males completing a year of college who subsequently obtained baccalaureates declined from 59 to 45 percent since the immediate post-World War II period, whereas for the entire nation the decline was from 63 to 52 percent. Nationally, but especially for the Pacific division, increasing access to college is associated with decreasing graduation rates for entrants--to the point where only about half of entrants graduated in the mid- to latter 1960's."¹

¹It can be objected that our age cohort analysis compares persons in their middle years in the latter 1960's (the college graduates of the immediate post-World War II period, virtually all of whom would have completed their educations) with persons in their mid- to latter twenties in 1970, the recent college graduates. According to CPS school enrollment data for the latter 1960's about 10% of the 25-29 year age group were still enrolled in higher education, and presumably some proportion would eventually graduate and raise the graduation rate for the cohort. Of the 10% still in school, however, about a third were in graduate or professional school, and consequently could make no further contribution to the college graduation rate. Of the remaining 6 or 7 percent enrolled as undergraduates, three or four percent might graduate if they followed the overall attrition patterns for collegians. If this were to occur the larger portion of the decline in the graduation rate we report would still remain.

Divisional comparisons for educational attainment in the latter 1960's

With the basic trend data in mind, let us look more closely at the most significant divisional findings from the CPS data for the latter 1960's. We quote once more from "Two Models of Open Enrollment."

"1. For the four Western divisions, including Pacific, proportions of younger age cohorts in the late 1960's completing high school are a few percentage points higher than those for the Eastern and East Central divisions of the country.

"2. The West South Central and Pacific divisions have the highest proportion of high school graduates entering college.

"3. The West South Central, Mountain, and Pacific divisions have the lowest proportions of college entrants completing four years of college.

"4. Of all divisions, Mountain and Pacific, in that order, have the lowest proportions of the age cohort completing four years of college.

"5. Of all divisions, Pacific and Mountain, in that order, have by far the lowest proportions both of college entrants who complete the first year, and college entrants who complete the second year of college.

We can summarize for the Pacific division, which represents the California experience in large part: Although particularly large proportions of younger age cohorts in the latter 1960's reached college, exceptionally large proportions dropped out within the first two years. The net effect is that the proportion of the total age group receiving the baccalaureate is the second lowest of all nine Census divisions. In short, other parts of the nation in which open enrollment was far less prevalent provided four or more years of college to a larger proportion of the total age group than did California."

We should also note here that the Pacific division's numerical contribution to national dropout totals is even greater than its higher dropout rate would indicate, since that higher dropout rate must be applied to the disproportionately large number of college entrants in the Pacific division, stemming from the high college entrance rate on the West Coast.

California attrition

Though the findings for the Pacific division should approximate those for California, nevertheless we would prefer to have data for the single state, since California is the cradle for "differential access open enrollment" in this country. Open enrollment has been in operation throughout California for a long time, and trend data in attrition should reflect the impact of differential access as it developed over the years. The following paragraph summarizes attrition in California in the latter 1960's. It should be born in mind that well over nine in ten college entrants in California enter the "open" public higher educational complex, so the following statistics reflect the operation of that system almost exclusively:

"Of 1,000 students who enter high school in California, about 800 will be graduated. Of these graduates, some 540 will enroll in a college somewhere. Of this group, fewer than 250 will complete more than their freshman year. Between 100 and 150 will eventually be graduated from some college somewhere."¹

In other words, somewhere between 12 and 28 percent of college entrants in California eventually obtain their baccalaureates. Earlier in this discussion we observed that the graduation rate in the latter 1960's for the Pacific division was 45%. We would expect the rates for California and the division to be roughly similar. The far lower rate from the state data is explained by the fact that the state data include in the college-going population those who drop out in the course of the first year, whereas the CPS definition requires that the student complete a year of college to be counted as a collegian. In California less than 50 percent of college entrants proceed beyond the initial year. Presumably many must drop in the course of the first year. In any case, the state data clearly indicate that dropping from college is the norm, rather than the exception, in

California

¹Joint Committee on Higher Education of the California Legislature, The Academic State, Page X (Place and publisher unattributed, 1968).

For all types of public colleges, but especially the 2-year ones, attrition seems to have increased during the decade of the 1960's:

"The junior colleges have experienced larger declines in already low persistence rates (larger than the considerable declines at senior institutions). The sophomore-freshman ratios have declined 37 percent from .570 to .370 for full-time students."²

For whatever reasons, the nature of the system, or the nature of the students, or both at once, as differential access matured in California dropout steadily increased, and especially so at the truly "open-door" 2-year schools. This trend parallels and supports the apparent increase in dropout for the Pacific region we reported earlier for a twenty-year span of time--in that instance reporting upon CPS data.

Summary of the above discussion

1. Nationally, but especially in more open enrollment locales, proportions and numbers entering college have sharply risen over the past several decades.
2. Nationally, but especially in more open enrollment locales, dropout also appears to have risen.
3. In the pioneer open enrollment state, California, nearly half of all college entrants fail to enroll as sophomores.
4. We may well ask what a year or two or three of college accomplishes for the dropout, as compared with simple graduation from high school or completion of the baccalaureate program. Our only measures here are the imputed income differentials for the various educational attainment groups a few years following termination of formal schooling. Our data derive from the CPS tapes and decennial census data in combination.

²Ibid., p. 23.

Income and educational attainment

The increment patterns we report here for men, the principal wage earners in most families, are parallel with those for women, though the absolute wages, education distributions, and occupations differ considerably for the two sexes.

Younger men who have completed a term or two of college (representing about 40 percent of college dropouts nationally) earn about 10 percent more per year than men who only graduated from high school. Men who complete three or four terms of college (an additional 37 percent of the dropouts) earn about 19 percent more than high school graduates. Men who drop from the final two years of college (the remaining 23 percent of the dropouts) earn about 21 percent more than high school graduates. But men who complete college earn about 50 percent more than high school graduates. The real "payoff" would seem to depend upon obtaining the baccalaureate.

We would put the above increment data in better perspective if we were to determine the college persistence rates in a state such as California, with a mature open enrollment program--one, moreover, which operates chiefly by means of numerous "open-door" junior colleges. It would also be helpful to examine trends in persistence, overall and by type of college, over some years. The following table, deriving from state data, presents gross persistence through college per thousand entering freshmen in California. Complete data are available only for a seven year span, but the partial data available prior to 1959-1960 indicate that the sharp decline in persistence was occurring even then. In interpreting this gross persistence data it should be born in mind that they represent only a rough

approximation of actual persistence patterns. Some students transfer from out of state colleges to California ones. Some students move in the opposite direction. These data also reflect transfer within the California higher educational complex. Also, since the numbers at the sophomore level, for example, were derived from sophomore-freshmen enrollment ratios in a given year, the effect of increased college-going is not controlled for. Finally, the number ultimately graduating from college is an educated guess by California educational researchers.

In spite of these limitations, the table should approximate the reality, which is quite sufficient for the present purpose.

**Gross Persistence in California Colleges Per Thousand Entering Freshmen
by Type of College Entered and for all Types of Colleges
1959-1960 and 1966-1967**

<u>Type of institution</u>	Educational level				Estimated number who will eventually be graduated from some college somewhere"
	Freshmen	Sophomores	Juniors	Seniors	
	No.	No.	No.	No.	No.
State University					
1959-1960	39	37	44	46	--
1966-1967	42	34	54	39	--
State colleges					
1959-1960	83	72	132	116	--
1966-1967	62	49	108	110	--
Public 2-yr colleges					
1959-1960	821	317	--	--	--
1966-1967	857	291	--	--	--
Private colleges					
1959-1960	57	49	49	50	--
1966-1967	39	33	30	28	--
All types of colleges					
1959-1960	1000	475	225	212	--
1966-1967	1000	407	192	177	185-278

Data sources: Joint Committee on Higher Education of the California Legislature, The Academic State, pp. 22-23, Tables 3.17 and 3.18 (Place and publisher unattributed, 1968).

Joint Committee on Higher Education of the California Legislature, The Challenge of Achievement, pp. 31,33, Tables 3.4 and 3.8 (Place and publisher unattributed, 1969).

Very simply, under California open enrollment, over half of the roughly seven in ten of high school graduates entering college in the latter 1960's could look forward to the modest increment to income associated with a year or less of college. Between one in four and one in five could look forward to the large increment associated with college graduation, assuming that the estimate of eventual graduates is reasonably sound.

We should also note that we do not know just what leads to the particular pattern of income increments for successively higher levels of educational attainment which we have described. The relatively and absolutely large increment associated with the baccalaureate is probably more a matter of the market value of the diploma than of some sudden access of knowledge and competence as commencement day approaches. But there is the further possibility that those who persevere and complete college may be a selective group with personal characteristics, largely unattributable to the college experience, leading to relative occupational success. These ambiguities simply reflect our imperfect knowledge of the impact of higher education per se, and our consequent inability to predict the personal and social consequences of truly "open enrollment." Research in depth would be required to resolve these uncertainties regarding practical benefits of higher education in later life. Given the current drive for increasing open enrollment, such research would seem to merit a high priority.

Changes in Elementary and High School Attendance,
1960 to 1967-1969

Changes in Elementary and High School Attendance, 1960 to 1967-69

A. J. Jaffe and Walter Adams

Changes During the 1960'sSchool enrollment

There were significant increases in school enrollment during the 1960's. The proportions of children and youth who were not enrolled in school fell considerably (see Table 1) for both whites and nonwhites, among persons living in central cities, the suburbs (i.e., the Standard Metropolitan Areas outside of the central cities) and in small cities and rural areas (i.e., outside SMSA's). In the latter 1960's almost all children and youth aged 7 to 17 were enrolled in school as follows:

	<u>Whites</u>	<u>Nonwhites</u>
Central cities	97.0%	96.0%
SMSA outside central cities	98.1%	97.0%
Outside SMSA	97.2	96.4

The major improvement, i.e., decrease in proportions not enrolled, occurred among those of high school age, from about age 14 on. Among children aged 10 to 13, almost all had been enrolled in school in 1960, so that there was comparatively little room for improvement.

Modal grade

There were significant decreases during the 1960's in the proportions of children who were below the modal grade (i.e., the typical grade for children of a specific age), and most importantly, increases in the proportions who were in grades above the mode (see Table 2). This was observed for both whites and nonwhites, and in all three residence areas. The improvement was perhaps most marked for nonwhites living

outside of SMSA's. In 1960, 27.9 percent of those aged 7 to 17 were below the mode; in the latter 1960's only 12.5 percent were below the modal grade.

Possible interpretations

What these observable improvements may mean as far as the quality and amount of education received is concerned cannot be told from these data alone. On the one hand, administrative measures which bring children into school and which result in moving the children through school in lock step, could have led to a decrease in the proportions below mode.

On the other hand, the fact that there were increases in the proportions above the mode suggests that improvements in teaching may have led to more children learning the same amount or more in less time. Or that more of the children in the latter 1960's have had nursery or kindergarten experience, and thus had a head start.

Until further information is available on the quantity and quality of education received during the 1960's in comparison with earlier decades, we shall not know how to interpret these findings.

The Situation in 1967-69

Whites and Negroes

At ages 7 to 9 there is little difference between the two groups. Slightly more of the Negro children are below grade, especially in areas outside SMSA's. On the other hand, slightly more of the Negro children are above the mode, in all three residence areas (see Table 3).

Beginning with the age group 10 to 13, however, and on through the older ages, more of the Negro youths are below the modal grade than are white youth, and fewer are above the mode. This apparently is a reflection of a situation reported by other investigators. For example, the 1965 Coleman Report Equality of Educational Opportunity found that although racial majority first graders scored considerably higher on tests than Negro first graders, by the twelfth grade this gap had appreciably increased, and especially so for the verbal test. In the first grade majority children averaged 53.2 and in the twelfth grade they averaged 52.1 on the verbal test. The Negro children scored 45.4 and 40.9 in the first and twelfth grades respectively. The gap between the two groups increased from 7.8 to 11.2. "Scores on each test at each grade level were standardized so that the average over the national sample equaled 50 and the standard deviation equaled 10." (See page 20 of the Coleman Report.) For the Negro youth, such deterioration in test performance, both relatively and absolutely, could well underlie the increase in Negroes below the modal grade, and the decrease in those above it.

Residence

Among white youth those living outside SMSA's had the largest proportions below mode, and the smallest proportions above the modal grade. This holds for all age groups. Comparison of the population living in the central cities versus the suburbs is more difficult. In the suburbs we find the smallest proportions below mode at all ages. On the other hand, the proportion above mode is somewhat larger in the central cities.

Precisely the same pattern by residence is observed among Negro children and youth.

Public vs. private schools, white children

Many more of the private school children than of the public are above mode in grade, and many more of the latter are below the mode (see Table 3). Whether this results from better teaching in the private schools, a more academically selective school body, or simply the sloughing off of the below modal grade students to the public school system we cannot say.

Table 1. Percent of Population Not Enrolled in School, by Age, Color, and Metropolitan Residence; United States, 1960 and Average 1967-69 85

Age	Central Cities			SMSA outside Central Cities			Outside SMSA		
	1960	67-69	change	1960	67-69	change	1960	67-69	change
WHITE									
7-9	2.4	0.7	-1.7	1.5	0.5	-1.0	2.4	0.7	-1.7
10-13	2.6	0.9	-1.7	1.6	0.7	-0.9	2.4	0.9	-1.5
14,15	5.7	1.	-4.0	3.4	1.3	-2.1	6.1	2.2	-3.9
16,17	19.4	12.5	-6.9	14.0	7.1	-6.9	18.9	11.1	-7.8
18,19	56.7	51.6	-5.1	56.0	45.8	-10.2	58.4	52.9	-5.5
NONWHITE									
7-9	3.6	0.9	-2.7	2.6	1.7	-0.9	5.0	0.8	-4.2
10-13	3.9	1.4	-2.5	3.0	1.7	-1.3	4.6	0.3	-4.3
14,15	8.5	3.2	-5.3	7.9	2.1	-5.8	11.1	2.4	-8.7
16,17	25.6	15.3	-10.3	22.1	8.6	-13.5	27.4	16.6	-10.8
18,19	64.0	58.0	-6.0	62.1	54.1	-8.0	59.5	55.3	-4.2
Ages 7-17*									
WHITE	6.0	3.0	-3.0	4.0	1.9	-2.1	5.9	2.8	-3.1
NONWHITE	8.4	4.0	-4.4	7.1	3.0	-4.1	9.8	3.6	-6.2
Age 7-19*									
WHITE	13.1	9.8	-3.3	11.4	8.0	-3.4	13.3	9.9	-3.4
NONWHITE	16.2	11.6	-4.6	14.8	10.2	-4.6	16.8	10.9	-5.9

*Standardized on basis of all age groups in 1970

Sources: 1960 data from U. S. Census of Population, 1960, School Enrollment, PC(2)5A, Table 2.
1967-69 data, unpublished material from the October Current Population Survey

Table 2. Relative Progress^{a/} in School, by Age, Color, and Metropolitan Residence: United States, 1960 and Average 1967-69

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Age and Mode	Central Cities			SMSA outside Central Cities			Outside SMSA		
	1960	67-69	change	1960	67-69	change	1960	67-69	change
WHITE									
7-9	100.0	100.0		100.0	100.0		100.0	100.0	
Below	2.7	1.3	-1.4	1.9	0.5	-1.4	3.6	1.3	-2.3
Mode	91.3	87.0	-4.3	94.4	88.2	-6.2	92.9	90.5	-2.4
Above	6.0	11.7	+5.7	3.7	11.3	+7.6	3.5	8.2	+4.7
10-13	100.0	100.0		100.0	100.0		100.0	100.0	
Below	7.6	3.2	-4.4	5.3	1.8	-3.5	10.0	4.3	-5.7
Mode	85.6	84.7	-0.9	90.8	86.6	-4.2	86.7	86.8	+0.1
Above	6.8	12.1	+5.3	3.9	11.6	+7.7	3.3	8.9	5.6
14,15	100.0	100.0		100.0	100.0		100.0	100.0	
Below	10.9	4.9	-6.0	8.1	2.4	-5.7	15.1	5.7	-9.4
Mode	80.4	82.5	+2.1	87.1	85.9	-1.2	80.8	85.2	+4.4
Above	8.7	12.6	+3.9	4.8	11.7	+6.9	4.1	9.1	+5.0
16,17	100.0	100.0		100.0	100.0		100.0	100.0	
Below	11.9	5.1	-6.8	9.8	1.8	-8.0	14.8	6.0	-8.8
Mode	81.6	80.4	-1.2	86.6	80.6	-6.0	82.6	85.7	+3.1
Above	6.5	14.5	+8.0	3.6	17.6	+14.0	2.6	8.3	+5.7
18,19	100.0	100.0		100.0	100.0		100.0	100.0	
Below	17.7	8.6	-9.1	17.7	2.3	-15.4	22.8	9.0	-13.8
Mode	75.2	78.3	+3.1	77.9	81.4	+3.5	74.2	82.7	+8.5
Above	7.1	13.1	+6.0	4.4	16.3	+11.9	3.0	8.3	+5.3
NONWHITE									
7-9	100.0	100.0		100.0	100.0		100.0	100.0	
Below	4.2	1.3	-2.9	5.1	1.7	-3.4	10.0	2.6	-7.4
Mode	85.5	86.1	+0.6	88.0	86.1	-1.9	83.8	87.8	+4.0
Above	10.3	12.6	+2.3	6.9	12.2	+5.3	6.2	9.6	+3.4
10-13	100.0	100.0		100.0	100.0		100.0	100.0	
Below	14.2	7.0	-7.2	15.3	5.2	-10.1	28.8	12.5	-16.3
Mode	76.4	80.4	+4.0	77.9	83.9	+6.0	65.8	79.6	+13.8
Above	9.4	12.6	+3.2	6.8	10.9	+4.1	5.4	7.9	+2.5
14,15	100.0	100.0		100.0	100.0		100.0	100.0	
Below	20.7	10.5	-10.2	23.2	7.0	-16.2	39.4	17.4	-22.0
Mode	68.1	77.6	+9.5	68.9	80.0	+11.1	54.6	73.6	+19.0
Above	11.2	11.9	+0.7	7.9	13.0	+5.1	6.0	9.0	+3.0

Table 2 Continued

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Age and Mode	Central Cities			SMSA outside Central Cities			Outside SMSA		
	1960	67-69	change	1960	67-69	change	1960	67-69	change
16,17	100.0	100.0		100.0	100.0		100.0	100.0	
Below Mode	24.6	13.0	-11.6	26.9	10.0	-16.9	41.9	22.8	-19.1
Above	69.0	77.0	+8.0	67.6	80.0	+12.4	54.7	71.9	+17.2
	6.4	10.0	+3.6	5.5	10.0	+4.5	3.4	5.3	+1.9
18,19	100.0	100.0		100.0	100.0		100.0	100.0	
Below Mode	41.8	21.8	-20.0	41.8	17.0	-24.8	61.7	35.1	-26.6
Above	53.2	70.5	+17.3	54.9	71.7	+16.8	36.1	57.2	+21.1
	5.0	7.7	+2.7	3.3	11.3	+8.0	2.2	7.7	+5.5
Age 7-17*									
WHITE	100.0	100.0		100.0	100.0		100.0	100.0	
Below mode	7.8	3.3	-4.5	5.7	1.6	-4.1	10.0	4.0	-6.0
Mode	85.3	84.2	-1.1	90.3	85.8	-4.5	86.6	87.4	+0.8
Above mode	6.9	12.5	+5.6	4.0	12.6	+8.6	3.4	8.6	+5.2
NONWHITE	100.0	100.0	-	100.0	100.0	-	100.0	100.0	-
Below mode	14.4	7.1	-7.3	16.0	5.4	-10.6	27.9	12.5	-15.4
Mode	76.1	80.9	+4.8	77.2	83.1	+5.9	66.7	79.4	+12.7
Above mode	9.5	12.0	+2.5	6.8	11.5	+4.7	5.4	8.1	+2.7
Age 7-19*									
WHITE	100.0	100.0	-	100.0	100.0	-	100.0	100.0	-
Below mode	9.0	4.1	-4.9	7.4	1.7	-5.7	11.8	4.7	-7.1
Mode	84.1	83.3	-0.8	88.6	85.2	-3.4	84.9	86.7	+1.8
Above mode	6.9	12.6	+5.7	4.0	13.1	+9.1	3.3	8.6	+5.3
NONWHITE	100.0	100.0	-	100.0	100.0	-	100.0	100.0	-
Below mode	18.3	9.2	-9.1	19.6	7.0	-12.6	32.6	15.7	-16.9
Mode	72.9	79.4	+6.5	74.1	81.5	+7.4	62.5	76.2	+13.7
Above mode	8.8	11.4	+2.6	6.3	11.5	+5.2	4.9	8.1	+3.2

*Standardized on basis of all age groups in 1970

^{a/} The Mode is the typical grade in school for a given age

Sources: see Table 1.

Table 3. Relative Progress^{a/} in School, by Age and Residence,
White Students by Public and Private Schools, and Total Negro Students:
United States, Average 1967-69

	White									Total Negro		
	Central cities			SMSA outside central cities			Outside SMSA			Central cities	SMSA outside Central cities	Outside SMSA
	Total	Public	Private	Total	Public	Private	Total	Public	Private			
7-9												
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below mode	1.3	1.4	0.8	0.5	0.6	0.1	1.3	1.4	0.1	1.3	1.9	2.3
Mode	87.0	87.3	86.1	88.2	88.5	86.6	90.5	90.7	88.4	86.3	65.8	87.8
Above mode	11.7	11.3	13.1	11.3	10.9	13.3	8.2	7.9	11.5	12.4	12.3	9.9
10-13												
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below mode	3.2	3.7	1.5	1.8	2.0	0.6	4.3	4.6	1.3	7.2	5.7	12.4
Mode	84.7	84.7	84.8	86.6	86.5	87.5	86.8	86.6	89.8	81.0	83.2	79.5
Above mode	12.1	11.6	13.7	11.6	11.5	11.9	8.9	8.8	8.9	11.8	11.1	8.1
14,15												
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below mode	4.9	5.4	2.7	2.4	2.6	1.3	5.7	5.8	4.0	11.0	7.9	18.2
Mode	87.5	82.8	81.1	85.9	85.9	85.2	85.2	85.2	83.1	77.2	80.5	72.8
Above mode	12.6	11.8	16.2	11.7	11.5	13.5	9.1	9.0	12.9	11.8	11.6	9.0
16,17												
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below mode	5.1	5.9	1.6	3.6	3.8	1.8	6.0	6.2	2.7	13.8	11.4	24.0
Mode	80.4	81.6	75.4	86.2	87.0	80.6	85.7	86.0	79.2	77.1	79.8	71.3
Above mode	14.5	12.5	23.0	10.2	9.2	17.6	8.3	7.8	18.1	9.1	8.8	4.7
18,19												
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below mode	8.6	10.7	2.4	6.0	7.5	2.3	9.0	10.4	1.7	24.2	21.6	35.3
Mode	78.3	78.4	78.2	83.0	83.5	81.4	82.7	81.7	88.2	69.0	70.4	56.4
Above mode	13.1	10.9	19.4	11.0	9.0	16.3	8.3	7.9	10.1	6.8	8.0	8.3

^{a/} The Mode is the typical grade in school for a given age

Source: see Table 1.

Progression of Children Through School

Progression of Children Through School*

The ideal information for studying the movement of children through school would be data about the same children over time (cohorts). We did not possess this kind of information; nevertheless this is the model we tried to approach. The data we worked with are for different children, according to age group and school grade at single points in time. From this we obtained the proportions in the expected modal or higher grade; the expected grade is elementary one at age six, and from there on is obtained by adding one grade more for each year of age. It is clear that a child will stay in his expected grade if he does not lose a year throughout school (or if having lost some he regains them--but this last possibility is unimportant). Tables A1-A6 contain this information; A1-A3 are for whites in Central Cities, Not Central Cities and Outside SMSA, and A4-A6 pertain to Negroes for the same three areas. In each of these tables there are four entries for each age (expected grade) group for the years 1967-1970. The average of these entries is listed in the fifth column to the right, and finally a second degree curve¹ was fitted to these averages. In this last operation we used only the span from 7 to 15 years of age; the first age group was dropped for the sake of a more uniform beginning, the last years because of increases in the number of dropouts.²

Findings

a. In all cases the proportion of students in the expected or higher grade declines through time (i.e., the total change is negative).

*Tabulations and analysis by Roberto Ríos from the special CPS tapes, 1967-1970.

¹Of this form: $y = a + bX + cX^2$

²We guess that the students lagging behind are overly represented among dropouts.

b. The rate of decline (% of children falling behind) decreases through time. At early ages (the beginning of elementary school) the declines range from almost 7% for Negro Central Cities, to close to 2% for Whites Not Central. By age 13 the rates of decline have slowed down considerably, and the range is 0.4% for Whites Outside SMSA to 4.1% for Negro Central Cities. At age 15 only one of the rates of decline is above 1%. In some cases the final years (age 14 and/or 15) of some of the fitted lines bend upward. This could be explained by a very low "true" rate of decline (almost zero) being affected by sampling variability, plus the initial effect of students dropping out.

c. In all cases the total percentage decline is larger for Negroes than for whites. This difference is more important than area differences.

d. Not Central Cities has the smallest total percentage decline, Outside SMSA ranks second, and finally Central Cities have the largest decline.

<u>Area</u>	White		Negro	
	(a)	(b)	(a)	(b)
Central Cities	11.4	88.6	29.7	70.3
Not Central Cities	7.3	92.7	20.3	79.7
Outside SMSA	9.1	90.9	28.5	71.5

(a) Total percentage decline (percentage that failed at least once)

(b) 100% minus - total percentage decline (percentage that did not fail a year).

Note: Alternatively, we can think of the 100% minus total percentage decline as the proportion going from elementary 2 to high school 2 without losing a year.

e. The curves start initially from different levels; some of the ranks are altered by age 15.

Rank ordering (from higher to lower)

<u>Initial</u>	<u>Final</u>
White Not CC	White Not CC
White CC	White CC
Black Not CC	White Not SMSA
Black CC	Black Not CC
White Not SMSA	Black CC
Black Not SMSA	Black Not SMSA

Table A-1. Progression of Children Through School
White (Male and Female) Central Cities
1967 - 1970

Age and expected grade	1967	1968	1969	1970	Average proportion	Smoothed average... proportion	Percent change	100 minus percent change
6 (E1)	.953	.972			.963			
7 (E2)	.878	.886	.884		.883	.880		
8 (E3)	.845	.859	.855	.867	.857	.853	-3.1	96.9
9 (E4)	.832	.820	.792	.845	.822	.830	-2.7	97.3
10 (E5)	.822	.808	.815	.784	.807	.811	-2.3	97.7
11 (E6)	.802	.794	.799	.774	.792	.797	-1.7	98.3
12 (E7)	.830	.809	.790	.752	.795	.786	-1.4	98.6
13 (E8)	.747	.792	.817	.765	.780	.780	-0.8	99.2
14 (H1)	.793	.789	.773	.806	.790	.778	-0.3	99.7
15 (H2)	.778	.769	.765	.767	.770	.780	+0.3	100.3
16 (H3)	.789	.776	.784	.739	.772			
17 (H4)	.743	.811	.812	.814	.795			
18 (C1)	.689	.719	.728	.734	.718			
19 (C2)	.706	.724	.762	.753	.736			

Fitted line (for smoothing)

$$y = .7966 - .0125 X + .0021 X^2$$

y = proportion of children in expected or higher grade

X = Age - 11*

*The subtraction was to simplify calculations. (The variables have same meaning in all six charts)

Source: Unpublished material from Current Population Surveys

Table A-2. Progression of Children Through School
White (Male and Female) Not Central
1967 - 1970

Age and expected grade	Proportion of children in expected grade or higher				Average proportion	Smoothed average proportion	Percent change	100 minus percent change
	1967	1968	1969	1970				
6 (E1)	.970	.964			.967			
7 (E2)	.905	.895	.895		.898	.892		
8 (E3)	.890	.869	.853	.884	.874	.876	-1.8	98.2
9 (E4)	.859	.869	.852	.860	.860	.863	-1.5	98.5
10 (E5)	.849	.848	.839	.846	.846	.851	-1.4	98.6
11 (E6)	.846	.838	.813	.817	.829	.842	-1.1	98.9
12 (E7)	.865	.849	.847	.839	.850	.835	-0.8	99.2
13 (E8)	.837	.849	.819	.836	.835	.830	-0.6	99.4
14 (H1)	.850	.822	.842	.833	.837	.828	-0.2	99.8
15 (H2)	.809	.824	.807	.824	.816	.827	-0.1	99.9
16 (H3)	.798	.822	.802	.797	.805			
17 (H4)	.819	.816	.812	.819	.817			
18 (C1)	.756	.743	.737	.730	.742			
19 (C2)	.756	.762	.749	.787	.764			

Fitted line

$$y = .8421 - .0081 X + .0011 X^2$$

Source: Unpublished material from Current Population Surveys

Table A-3. Progression of Children Through School
White (Male and Female) Not in SMSA
1967-1970

Age and expected grade	Proportion of children in expected grade or higher				Average proportion	Smoothed average proportion	Percent change	100 minus percent change
	1967	1968	1969	1970				
6 (E1)	.969	.950			.960			
7 (E2)	.874	.838	.845		.852	.847		
8 (E3)	.811	.813	.829	.823	.819	.820	-3.2	96.8
9 (E4)	.783	.776	.819	.796	.794	.799	-2.6	97.4
10 (E5)	.789	.789	.759	.770	.777	.782	-2.1	97.9
11 (E6)	.760	.783	.771	.754	.767	.770	-1.5	98.5
12 (E7)	.785	.772	.756	.765	.772	.763	-0.9	99.1
13 (E8)	.784	.757	.748	.755	.761	.760	-0.4	99.6
14 (H1)	.772	.785	.778	.744	.770	.763	+0.4	100.4
15 (H2)	.773	.753	.765	.755	.762	.770	+0.9	100.9
16 (H3)	.774	.800	.780	.769	.781			
17 (H4)	.759	.818	.769	.789	.784			
18 (C1)	.701	.633	.702	.677	.678			
19 (C2)	.682	.720	.748	.750	.725			

Fitted line:

$$y = .770 - .0096 X + .0024 X^2$$

Source: Unpublished material from Current Population Surveys

Table A-4. Progression of Children Through School
 Negro (Male and Female) Central Cities
 1967 - 1970

Age and expected grade	Proportion of children in expected grade or higher				Average proportion	Smoothed average proportion	Percent change	100 minus percent change
	1967	1968	1969	1970				
6 (E1)	.952	.936			.944			
7 (E2)	.878	.847	.905		.877	.868		
8 (E3)	.800	.795	.820	.842	.814	.810	-6.7	93.3
9 (E4)	.740	.746	.790	.711	.747	.758	-6.4	93.6
10 (E5)	.691	.704	.681	.686	.691	.715	-5.7	94.3
11 (E6)	.730	.620	.676	.682	.677	.678	-5.2	94.8
12 (E7)	.678	.678	.627	.710	.673	.650	-4.1	95.9
13 (E8)	.594	.631	.671	.631	.632	.629	-3.2	96.8
14 (H1)	.610	.645	.662	.611	.632	.616	-2.1	97.9
15 (H2)	.620	.549	.580	.615	.591	.610	-1.0	99.0
16 (H3)	.610	.564	.613	.539	.582			
17 (H4)	.456	.561	.550	.582	.537			
18 (C1)	.365	.408	.519	.455	.437			
19 (C2)	.375	.471	.440	.467	.438			

Fitted line:

$$y = .6784 - .0323 X + .0038 X^2$$

Source: Unpublished material from Current Population Surveys

Table A-5. Progression of Children Through School
Negro (Male and Female) - Not Central

Age and expected grade	Proportion of children in expected grade or higher				Average proportion	Smoothed average proportion	Percent change	100 minus percent change
	1967	1968	1969	1970				
6 (E1)	.976	.935			.956			
7 (E2)	.850	.844	.870		.855	.856		
8 (E3)	.814	.750	.836	.841	.810	.805	-6.0	94.0
9 (E4)	.833	.794	.710	.785	.781	.761	-5.5	94.5
10 (E5)	.646	.600	.790	.757	.698	.726	-4.6	95.4
11 (E6)	.692	.689	.593	.759	.683	.699	-3.7	96.3
12 (E7)	.708	.699	.721	.655	.696	.682	-2.4	97.6
13 (E8)	.703	.800	.646	.552	.675	.673	-1.3	98.7
14 (H1)	.672	.695	.661	.754	.696	.673	0.0	100.0
15 (H2)	.649	.750	.635	.623	.664	.682	+1.3	101.3
16 (H3)	.646	.576	.623	.630	.619			
17 (H4)	.638	.579	.696	.509	.606			
18 (C1)	.480	.500	.448	.455	.471			
19 (C2)	.300	.500	.533	.593	.482			

Fitted line:

$$y = .6993 - .0220X + .0044 X^2$$

Source: Unpublished material from Current Population Surveys

Table A-6. Progression of Children Through School
Negro (Male and Female) - Not in SMSA
1967 - 1970

Age and expected grade	Proportion of children in expected grade or higher				Average proportion	Smoothed average proportion	Percent change	100 minus percent change
	1967	1968	1969	1970				
6 (E1)	.969	1.000			.965			
7 (E2)	.835	.770	.771		.792	.782		
8 (E3)	.740	.750	.691	.723	.726	.741	-5.2	94.8
9 (E4)	.664	.697	.701	.721	.696	.705	-4.9	95.1
10 (E5)	.662	.692	.745	.684	.696	.671	-4.8	95.2
11 (E6)	.603	.579	.664	.649	.624	.642	-4.3	95.7
12 (E7)	.564	.606	.628	.712	.628	.616	-4.0	96.0
13 (E8)	.611	.519	.582	.641	.588	.593	-3.7	96.3
14 (H1)	.595	.575	.573	.560	.576	.575	-3.0	97.0
15 (H2)	.571	.500	.642	.523	.559	.559	-2.8	97.2
16 (H3)	.485	.520	.556	.546	.527			
17 (H4)	.490	.543	.557	.581	.543			
18 (C1)	.389	.286	.397	.292	.341			
18 (C2)	.267	.379	.400	.424	.368			

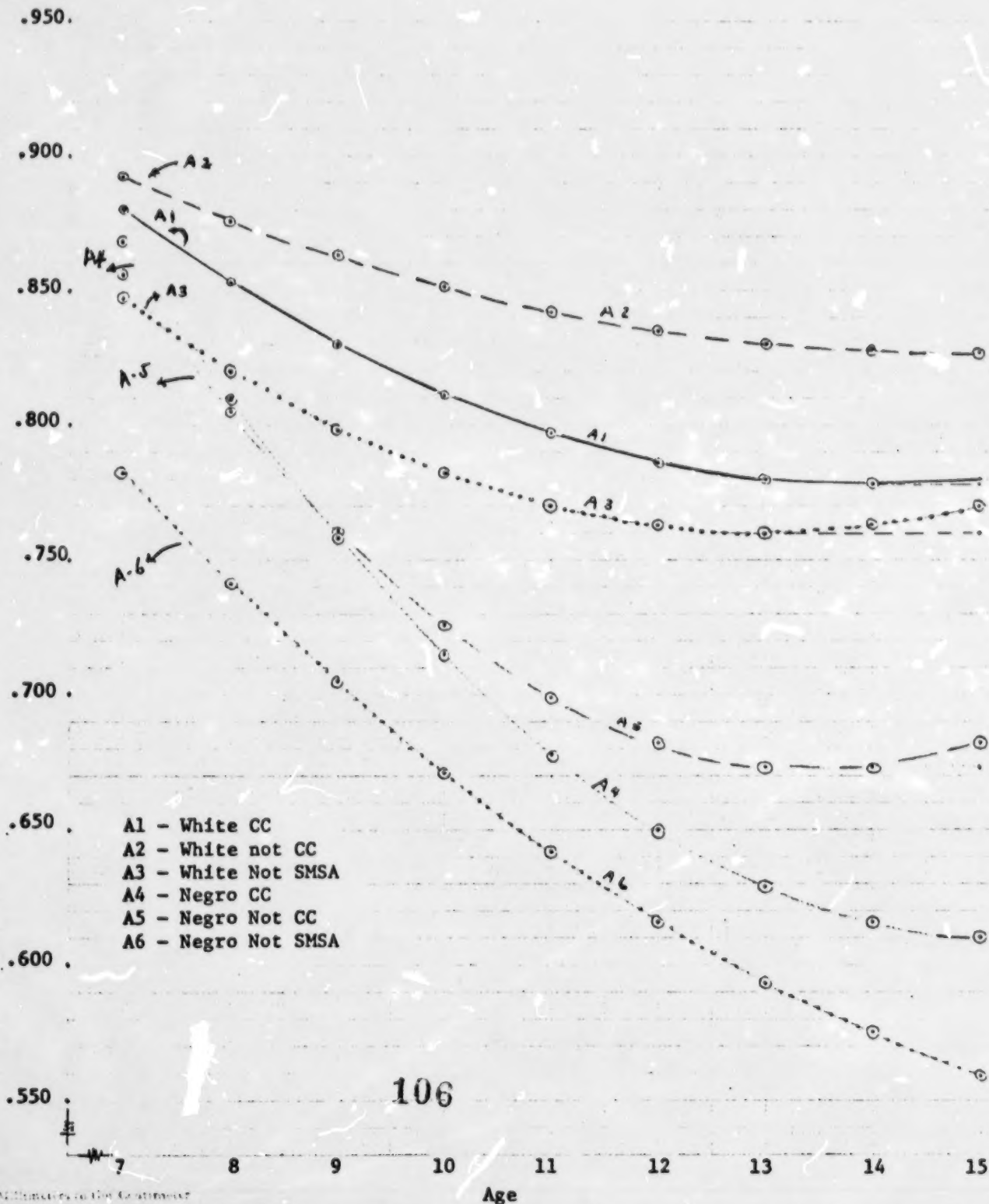
Fitted line:

$$y = .6418 - .0278x + .0018 x^2$$

Source: Unpublished material from Current Population Surveys

Progression of Children Through School Graph of Tables A1 through A6

Proportion in
expected grade
or higher



Appendix D

Questionnaires for the Third and Fourth Follow-Ups
of the Fall 1965 CPS High School Seniors



U.S. DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

THIRD OR WINTER 1969-1970

FOLLOW-UP QUESTIONNAIRE

Dear Friend:

This letter is to ask for your continued cooperation with the Bureau of the Census in a survey vitally important in planning for the Nation's future educational needs.

This is one of a series of follow-up checks conducted in the course of the survey which you may perhaps recall was started in October 1965 among a small sample of persons who were then enrolled as high school seniors.

We are asking that you continue to take part in the survey to the extent of filling out the questionnaire --- which can be done in a few minutes --- and returning it to us within the next 5 days in the self-addressed envelope provided for that purpose. No stamp is required.

Your answers will enable national and local leaders to evaluate the educational goals of persons who were high school seniors in October 1965 and, thus, to plan programs to meet changing conditions in our school systems. The information you provide will be kept confidential by law and will be used for statistical purposes only.

Because the survey is being taken from a small sample of persons, we need to have a completed form from everyone in the survey.

Sincerely,

A handwritten signature in cursive script that reads "George H. Brown".

GEORGE H. BROWN
Director
Bureau of the Census

Enclosure

1. What is your marital status? (Mark ONE only)

- 1 ☐ Married
 2 ☐ Widowed, divorced, separated
 3 ☐ Never married

2. Did you graduate from high School?

- 1 ☐ Yes - Skip to Q.4
 2 ☐ No - Go to Q.3

3. Which of the following best describes your MAIN activity at the present time? (Mark MAIN one)

- 1 ☐ Working
 2 ☐ Looking for work
 3 ☐ Keeping house
 4 ☐ In Armed Forces
 5 ☐ Attending high school
 6 ☐ Attending a noncollegiate school
 7 ☐ Other - Specify _____

Skip to Q.30

4. When did you graduate from high school?

- 1 ☐ 1965 or 1966
 2 ☐ 1967
 3 ☐ 1968
 4 ☐ 1969

5. Since graduating from high school, have you attended or been enrolled in a regular college? (Count only enrollment in a regular college which grants a college degree upon completion. Do not count enrollment in educational institutions outside the regular system, such as, barber colleges, business colleges, technical schools, etc., but do include junior colleges.)

- 1 ☐ Yes - Go to Q.6
 x ☐ No - Skip to Q.17

6. Please list the names of all colleges you have attended. If you have attended more than one college, please identify the first one you entered by completing line "1," the second in line "2," and so forth. For "Dates attended" please enter the date you first entered each college and the date you last attended each college. Check if you graduated.

Line No.	Name and address of college (a)	City and State (b)	If a branch campus, name of parent institution (c)	Dates attended (d)	Did you graduate from this college? (e)	
					Yes	No
1				Entered	1	2
				Last attended		
2				Entered	1	2
				Last attended		
3				Entered	1	2
				Last attended		
4				Entered	1	2
				Last attended		

7. Are you now enrolled in college, that is, fall 1969?
 1 ☐ Yes - Go to Q.8 x ☐ No - Skip to Q.17

8. Do you now attend college as a full-time or part-time student?
 1 ☐ Full-time 2 ☐ Part-time

9. How do you think you compare with the other students in your college class? (If you have attended more than one college, answer for the college entered last.)
 1 ☐ Among the brightest 4 ☐ Below average
 2 ☐ Above average 5 ☐ Among the lowest
 3 ☐ Average

10. What is now your MAJOR field of study, that is, fall 1969?
 01 ☐ Agriculture 07 ☐ Mathematics
 02 ☐ Biological and health sciences 08 ☐ Physical sciences
 03 ☐ Business and commerce 09 ☐ Social sciences
 04 ☐ Education 10 ☐ Other - Specify _____
 05 ☐ Engineering, Technology
 06 ☐ English, languages, art, music 99 ☐ Undecided

11. What proportion of your college expenses does your family now pay?
 1 ☐ All 4 ☐ Some, but less than 50%
 2 ☐ More than 75%, but not all 0 ☐ None
 3 ☐ 50% to 75%

12. In addition to studying, did you work LAST MONTH for pay or profit?
 1 ☐ Yes - How many hours per week? _____
 How much did you earn per week? \$ _____
 x ☐ No

13. While attending college do you - - (Mark MAIN one)
 1 ☐ Live with husband or wife? 5 ☐ Live in fraternity or sorority housing?
 2 ☐ Live with parents or guardians? 6 ☐ Live in rooming house or apartment?
 3 ☐ Live with other relatives? 7 ☐ Other - Specify _____
 4 ☐ Live in college housing?

If first entered college in fall of 1969, skip to Q.20. All others attending college go to Q.14.

14. What has been your average grade in college this past year?
 01 ☐ A+ 03 ☐ A- 05 ☐ B 07 ☐ C+ 09 ☐ C-
 02 ☐ A 04 ☐ B+ 06 ☐ B- 08 ☐ C 10 ☐ Under C-

15. From what sources did you borrow money to finance college this past year? (Mark any which provided \$100 or more during the past year.)
 1 ☐ From college administered Federal loan funds (NDEA)
 2 ☐ Federally insured student loan from other lenders
 3 ☐ Other loan
 4 ☐ Did not borrow \$100 or more

16. From what OTHER sources did you finance college this past year? (Mark any which provided \$100 or more during the past year.)

- | | |
|--|--|
| 1 ☐ Summer earnings | 6 ☐ Noncollege employment while attending |
| 2 ☐ Savings, other than summer earnings | 7 ☐ Federal Educational Opportunity Grant |
| 3 ☐ Scholarship | 8 ☐ Other - Specify _____ |
| 4 ☐ Veterans benefits | |
| 5 ☐ Employment by college while attending | 9 ☐ None of these |

Skip to Q.20

17. Which of the following best describes your MAIN activity at the present time? (Mark MAIN one)

- | | |
|---|---|
| 1 ☐ Working | 5 ☐ Attending a noncollegiate school |
| 2 ☐ Looking for work | 6 ☐ Other - Specify _____ |
| 3 ☐ Keeping house | |
| 4 ☐ In Armed Forces | |

18. What was your PRINCIPAL reason for (not continuing) (not entering) college? (Mark MAIN reason)

- | | |
|--|---|
| 01 ☐ Graduated from a 2-year or junior college | 09 ☐ Entered an educational institution other than a college - Specify below |
| 02 ☐ Graduated from a 4-year or senior college - Skip to Q.21 | |
| 03 ☐ Financial problems | |
| 04 ☐ Academic problems | |
| 05 ☐ Got married | |
| 06 ☐ Health reasons | |
| 07 ☐ Preferred to take a job | |
| | 10 ☐ Entered Armed Forces |
| | 11 ☐ Other - Specify _____ |

Name of school
City and State
Type of program

19. Do you expect to (return to) (enter) college eventually?

- | | |
|---|--------------|
| 1 ☐ Yes, definitely | } Go to Q.20 |
| 2 ☐ Yes, maybe | |
| 3 ☐ No, definitely - Skip to Q.23 | |
| 4 ☐ No, already graduated from a 4-year college - Skip to Q.21 | |

20. Do you plan to receive a bachelors degree?

- | | |
|--|--------------|
| 1 ☐ I have already received one | } Go to Q.21 |
| 2 ☐ Yes | |
| 3 ☐ No - Skip to Q.23 | |

21. Do you plan to go to graduate or professional school?

- | | |
|---|--------------|
| 1 ☐ Yes, definitely | } Go to Q.22 |
| 2 ☐ Yes, maybe | |
| 3 ☐ I am currently attending one | |
| 4 ☐ No - Skip to Q.23 | |

22. What will be (is) your MAJOR field of study in graduate or professional school? (Mark MAIN one)

- | | |
|--|--|
| 01 ☐ Biological sciences | 09 ☐ Medicine, dentistry, or other health field |
| 02 ☐ Business and commerce | 10 ☐ Physical sciences |
| 03 ☐ Education | 11 ☐ Religion |
| 04 ☐ Engineering | 12 ☐ Social sciences |
| 05 ☐ English, journalism, languages | 13 ☐ Other - Specify _____ |
| 06 ☐ Fine and applied art | |
| 07 ☐ Law | |
| 08 ☐ Mathematics | 99 ☐ Undecided |

23. Which of the following occupational groups do you HOPE to belong to a few years from now? Which do you EXPECT to belong to? (Mark only one block in each column.)

	Hope	Expect
<i>Technical</i> - Such as draftsman, surveyor, medical or dental technician, etc.	01	02
<i>Official</i> - Such as manufacturer, officer in a large company, banker, government official or inspector, etc.	03	04
<i>Manager</i> - Such as sales manager, store manager, office manager, factory supervisor, etc. . .	05	06
<i>Proprietor or owner</i> - Such as owner of a small business, wholesaler, retailer, contractor, restaurant owner, etc.	07	08
<i>Semiskilled worker</i> - Such as factory machine operator, bus or cab driver, meat cutter, etc. .	09	10
<i>Clerical worker</i> - Such as bank teller, bookkeeper, sales clerk, office clerk, mail carrier, messenger, etc.	11	12
<i>Service worker</i> - Such as barber, waiter, etc.	13	14
<i>Protective worker</i> - Such as policeman, detective, sheriff, fireman, etc.	15	16
<i>Salesman</i> - Such as real estate or insurance salesman, factory representative, etc.	17	18
<i>Farm or ranch manager or owner</i>	19	20
<i>Farm worker on one or more than one farm</i>	21	22
<i>Workman or laborer</i> - Such as factory or mine worker, fisherman, filling station attendant, longshoreman, etc.	23	24
<i>Professional</i> - Such as accountant, artist, clergyman, dentist, doctor, engineer, lawyer, librarian, scientist, college professor, social worker, etc.	25	26
<i>Skilled worker or foreman</i> - Such as baker, carpenter, electrician, enlisted man in the Armed Forces, mechanic, plumber, plasterer, tailor, foreman in a factory or mine, etc.	27	28
<i>Housewife</i> - Not a member of the labor force.	29	30

24. What was your MAJOR high school curriculum? (Mark ONE only)

- | | |
|--|--|
| 1 ☐ College preparatory | 4 ☐ General |
| 2 ☐ Commercial | 5 ☐ Other - Specify _____ |
| 3 ☐ Vocational | |

25. For a moment think back to your late grammar school and early high school years. Which factors on the list below really influence your choice of high school curriculum? (Mark as many as are TRULY RELEVANT, and circle THE SINGLE MOST RELEVANT ITEM.)

- 01 ☐ Advice of teacher or guidance person
 02 ☐ It was the program that most interested me
 03 ☐ Desire or advice of parent or guardian
 04 ☐ It was the program my friends were entering
 05 ☐ It seemed the most promising program in terms of my future
 06 ☐ My school did not permit me to enter the program I wanted, and this was the best or only alternative
 07 ☐ My school did not offer the program I wanted and this was the best or only alternative
 08 ☐ I had simply assumed I would enter this program as far back as I can remember
 09 ☐ Everybody worthwhile at school took this program
 10 ☐ It was the program best suited to my particular talents and abilities
 11 ☐ It was the most direct route to college
 12 ☐ Other reason - Specify _____

26. Did your teacher or guidance counselor in high school advise you to:

- 1 ☐ Enter college
 2 ☐ Not enter college
 3 ☐ Received no advice

27. Quite apart from practical considerations, did you WANT to attend college WHEN YOU WERE IN HIGH SCHOOL?

- 1 ☐ Yes, very much
 2 ☐ Yes, somewhat
 3 ☐ Generally indifferent
 4 ☐ No

If now attending college, Go to Q.28. All others Skip to Q.30.

28. Do you WANT to attend college NOW?

- 1 ☐ Yes, very much
 2 ☐ Yes, somewhat
 3 ☐ Generally indifferent
 4 ☐ No
- Skip to Q.30* *Go to Q.29*

29. By and large, do you feel that your lack of desire to attend college NOW is primarily a matter of . . .

- 1 ☐ Your personal tastes, aims, and interests?
 OR
 2 ☐ Something to do with the nature of higher education or colleges today? (Please specify briefly)

30. Since we plan to repeat this follow-up each year through 1971, we would appreciate the names of two persons who will always know where you are.

Name	Relationship	Name	Relationship
Street and number		Street and number	
City	State	City	State
ZIP code	Telephone No.	ZIP code	Telephone No.

FORM CPS-593
(2-6-71)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUSFOLLOW-UP OF
1965 HIGH SCHOOL SENIORSRETURN
COMPLETED
FORM TOBureau of the Census
1201 East Tenth Street
Jeffersonville, Indiana 47130**NOTICE** - Your report to the Census Bureau is confidential by law (Title 13, U.S. Code). It may be seen only by sworn Census employees and may be used only for statistical purposes.

(Please correct any error in name and address including ZIP code)

Dear Friend:

This letter is to ask your continued cooperation with the Bureau of the Census in a survey vitally important in planning for the Nation's future educational needs.

It is one of a series of follow-up checks conducted as part of the survey which started in October 1965 among a small sample of persons who were then enrolled as high school seniors.

We are asking that you continue to take part in the survey to the extent of filling out the questionnaire - which can be done in a few minutes - and returning it to us within the next 5 days in the preaddressed, postage-paid envelope.

Your answers will enable national and local leaders to evaluate the educational goals of persons who were high school seniors in October 1965 and, thus, to plan programs to meet changing conditions in our school systems. The information you provide will be kept confidential by law and will be used for statistical purposes only.

Because the survey is being taken from a small sample of persons, we need to have a completed form from everyone in the survey.

Sincerely,

GEORGE H. BROWN
Director
Bureau of the Census

Enclosure

FORM OR LETTER 1970-1971
 RETURN-OF QUESTIONNAIRE

1a. What is your marital status? 1 ☐ Married } <i>Continue with 1b</i> 2 ☐ Widowed, divorced, separated 3 ☐ Never married - Skip to 2	6. About how much financial assistance per year do you feel you would need in order to attend college? Amount (Omit cents) \$ 00															
1b. Do you have any children? ☐ Yes - How many? Number ☐ No	7. Which of the following sources of financial assistance would you find generally acceptable? Which ones unacceptable? (Mark (X) acceptable or unacceptable for each source.) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%; text-align: center;">Acceptable</th> <th style="width: 10%; text-align: center;">Unacceptable</th> </tr> </thead> <tbody> <tr> <td>Student loan.</td> <td style="text-align: center;">1 ☐</td> <td style="text-align: center;">2 ☐</td> </tr> <tr> <td>Scholarship or grant.</td> <td style="text-align: center;">3 ☐</td> <td style="text-align: center;">4 ☐</td> </tr> <tr> <td>Help from family or friends</td> <td style="text-align: center;">5 ☐</td> <td style="text-align: center;">6 ☐</td> </tr> <tr> <td>Paid employment provided by college.</td> <td style="text-align: center;">7 ☐</td> <td style="text-align: center;">8 ☐</td> </tr> </tbody> </table>		Acceptable	Unacceptable	Student loan.	1 ☐	2 ☐	Scholarship or grant.	3 ☐	4 ☐	Help from family or friends	5 ☐	6 ☐	Paid employment provided by college.	7 ☐	8 ☐
	Acceptable	Unacceptable														
Student loan.	1 ☐	2 ☐														
Scholarship or grant.	3 ☐	4 ☐														
Help from family or friends	5 ☐	6 ☐														
Paid employment provided by college.	7 ☐	8 ☐														
2. Did you graduate from high school? 1 ☐ Yes - Continue with 3 2 ☐ No - Skip to 66 on page 10	8. If you were to enter the college of your choice, about how much would you expect to pay per year to cover your college-related expenses, such as tuition and fees, room and board, textbooks, etc.? Amount (Omit cents) \$ 00															
3. Since graduating from high school, have you attended or been enrolled in a regular college? (Count only enrollment in a regular college which grants a college degree upon completion. Include 2-year or junior college. Do not count enrollment in educational institutions outside the regular system, such as barber colleges, business colleges, technical schools, etc.) 1 ☐ Yes - Skip to 10 on page 3 2 ☐ No - Continue with 4	9. Which of the following best describes your main activity at the present time? 1 ☐ Working 2 ☐ Looking for work 3 ☐ Keeping house. 4 ☐ In Armed Forces 5 ☐ Attending a non-collegiate school 6 ☐ Other - Specify ➤															
4. Do you expect to enter college eventually? 1 ☐ Yes 2 ☐ No	Skip to 66 on page 10															
5. What was your reason(s) for not entering college? (Mark (X) as many as applicable.) 1 ☐ Academic problems 2 ☐ Got married 3 ☐ Health reasons 4 ☐ Financial problems 5 ☐ Preferred to take a job 6 ☐ Entered an educational institution other than a college 7 ☐ Entered Armed Forces 8 ☐ Other - Specify ➤																

If "FINANCIAL PROBLEMS" was marked, answer questions 6, 7, and 8; all others, skip to question 9.

10. Please list the names and addresses of all colleges or universities you have attended. If you have attended more than one college, please identify the first one you entered by completing line "1," the second in line "2," and so forth. For "Dates attended," enter the month and year you first entered each college, and the month and year you last attended each college. Mark (X) your status for each institution.

Line number	Name and address of college/university (a)	If a branch campus, give name of parent institution (b)	Dates attended (Month/Year) (c)	What is (was) your status at this college/university? Mark several, if relevant. (d)		
				Under-graduate degree recipient	Under-graduate no degree	Graduate student
1	Name	Parent institution	Entered MONTH YEAR	1 ☐	2 ☐	3 ☐
	Address (Number and street)					
	City State ZIP code		Last attended MONTH YEAR			
2	Name	Parent institution	Entered MONTH YEAR	1 ☐	2 ☐	3 ☐
	Address (Number and street)					
	City State ZIP code		Last attended MONTH YEAR			
3	Name	Parent institution	Entered MONTH YEAR	1 ☐	2 ☐	3 ☐
	Address (Number and street)					
	City State ZIP code		Last attended MONTH YEAR			
4	Name	Parent institution	Entered MONTH YEAR	1 ☐	2 ☐	3 ☐
	Address (Number and street)					
	City State ZIP code		Last attended MONTH YEAR			

11. Are you now enrolled in a college or university?

- 1 ☐ Yes, I am now enrolled in college as an undergraduate.
- 2 ☐ Yes, I am now enrolled in graduate or professional school . .
- 3 ☐ No, I am not now enrolled in a college or university at all

Continue with 12

Skip to 29 on page 5

12. What year of college are you now enrolled in?

- 1 ☐ Freshman (1st year)
- 2 ☐ Sophomore (2nd year)
- 3 ☐ Junior (3rd year)
- 4 ☐ Senior (4th year)
- 5 ☐ First year graduate or professional school
- 6 ☐ Second or later year graduate or professional school

13. When you first entered college, what was your field of major interest?

What is (was) your undergraduate major?

If you are enrolled in (should enter) graduate or professional school, what is (would be) your major?

(Mark (X) one box in each column for your major interest or field of study.)

	When entered college	In college	Graduate or professional school
Agriculture	1	2	3
Botany, zoology or other biological sciences. . .	1	2	3
Business and commerce. .	1	2	3
Education.	1	2	3
Engineering, technology .	1	2	3
Humanities, such as English, languages, art, music. . .	1	2	3
Mathematics	1	2	3
Physical sciences	1	2	3
Social sciences.	1	2	3
Law	1	2	3
Journalism	1	2	3
Medicine, dentistry, nursing or other health fields. .	1	2	3
Religion.	1	2	3
Other - Specify 	1	2	3
Undecided	1	2	3

14. What was the highest degree you expected to obtain when you entered college?

What is the highest degree you expect now?

(Mark (X) one box in each column below.)

	When entered	Now
No degree at all.	1	2
Vocational certificate for less than 2 years of study.	1	2
2-year or junior college degree . . .	1	2
4-year or senior college degree. . .	1	2
Master's degree or its equivalent. . .	1	2
Doctorate or its equivalent.	1	2
Professional degree (including law, medicine, etc.)	1	2

15. When do you expect to complete your formal education?

- 1 ☐ 1971 4 ☐ 1974
 2 ☐ 1972 5 ☐ 1975
 3 ☐ 1973 6 ☐ 1976 or later

16. Are you having any significant problems in financing college (graduate or professional school)?

- 1 ☐ Yes - Continue with 17
 2 ☐ No - Skip to 18

17. How much additional funding do you feel you need per year to cover your educational expenses comfortably? Amount (Omit cents)
 \$.00

18. Think of the current academic year. How are you funding your educational expenses?

(Mark (X) the relevant sources below, and enter the approximate amount you received from each.)

	Amount (Omit cents)
01 ☐ Student loan.	\$.00
02 ☐ Scholarship	\$.00
03 ☐ Federal "Work-Study" program earnings.	\$.00
04 ☐ Educational Opportunity grant.	\$.00
05 ☐ Summer employment.	\$.00
06 ☐ Employment during term, other than "Work-Study".	\$.00
07 ☐ Own savings.	\$.00
08 ☐ Family help.	\$.00
09 ☐ G.I. Bill	\$.00
10 ☐ Other	\$.00

19. Which of the following sources of financial assistance do you find generally acceptable?

Which ones unacceptable?

(Mark (X) acceptable or unacceptable for each source.)

	Acceptable	Unacceptable
Student loan	1 ☐	2 ☐
Scholarship or grant.	3 ☐	4 ☐
Help from family or friends	5 ☐	6 ☐
Paid employment provided by college	7 ☐	8 ☐

20. Whether or not you have been able to meet your educational expenses without much difficulty, could any of the following statements apply to you? (Mark (X) either "Yes" or "No" for each statement.) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%; text-align: center;">Yes</th> <th style="width: 25%; text-align: center;">No</th> </tr> </thead> <tbody> <tr> <td>With more funds available I would have gone to a better college. . . .</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Lack of funds meant that I had to work and my grades suffered</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>I had to interrupt college for a while and go to work full time</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>		Yes	No	With more funds available I would have gone to a better college. . . .	1	2	Lack of funds meant that I had to work and my grades suffered	1	2	I had to interrupt college for a while and go to work full time	1	2	27. Which best describes your current living arrangements while attending college (graduate or professional school)? 1 ☐ I live in college or university housing (including fraternity and sorority housing) 2 ☐ I have my own residence (singly, with spouse, or with others; including rooming and boarding houses) 3 ☐ I live in my parental home (including relatives and guardians) and commute to the campus
	Yes	No											
With more funds available I would have gone to a better college. . . .	1	2											
Lack of funds meant that I had to work and my grades suffered	1	2											
I had to interrupt college for a while and go to work full time	1	2											
21. About how much do you now pay per year to cover your college-related expenses, such as tuition and fees, room and board, textbooks, etc.? Amount (Omit cents) \$.00	28. About how many miles do you live from campus? _____ Miles 00 ☐ I live on campus } Skip to 66 on page 10												
22. Are you now attending college (graduate or professional school) full-time or part-time? 1 ☐ Full-time 2 ☐ Part-time	29. What was the last year of college which you completed? 1 ☐ Freshman (1st year) 2 ☐ Sophomore (2nd year) 3 ☐ Junior (3rd year) 4 ☐ Senior (4th year) 5 ☐ A year or more of graduate or professional school 6 ☐ Didn't complete a year of college												
23. Do you plan to attend summer school next summer? 1 ☐ Yes 2 ☐ No	30. What was your major field of interest or study in college? 01 ☐ Agriculture 02 ☐ Botany, zoology or other biological sciences 03 ☐ Business and commerce 04 ☐ Education 05 ☐ Engineering, technology 06 ☐ Humanities, such as English, languages, art, music 07 ☐ Mathematics 08 ☐ Physical sciences 09 ☐ Social sciences 10 ☐ Law 11 ☐ Journalism 12 ☐ Medicine, dentistry, nursing, or other health fields 13 ☐ Religion 14 ☐ Other - Specify → _____ _____												
24. Have you attended summer school in the past? 1 ☐ Yes 2 ☐ No													
25. Please mark as many of the following statements as apply to you. 1 ☐ I have hesitated (would hesitate) to take out a student loan because I don't want to incur future indebtedness. 2 ☐ I feel that working during term interfered (would interfere) with my academic progress. I don't like to accept money from my family for educational expenses because. . . 3 ☐ My family can't afford the money 4 ☐ I prefer to be financially independent													
26. How academically selective is the college (graduate or professional school) you are now attending? (A selective college is one which admits only some of the applicants, generally those with better high school records.) 1 ☐ Highly selective 2 ☐ Somewhat selective 3 ☐ Unselective													

31. What was the highest degree you expected to obtain when you entered college?
What is the highest degree you expect now?
(Mark (X) one box in each column below.)

	When entered	Now
No degree at all	1 ☐	2 ☐
Vocational certificate for less than 2 years of study	1 ☐	2 ☐
2-year or junior college degree	1 ☐	2 ☐
4-year or senior college degree	1 ☐	2 ☐
Master's degree or its equivalent	1 ☐	2 ☐
Doctorate or its equivalent	1 ☐	2 ☐
Professional degree (including law, medicine, etc.)	1 ☐	2 ☐

32. When you were at college, did you have any serious problems paying your educational expenses?
1 ☐ Yes - Continue with 33
2 ☐ No - Skip to 34

33. How much additional funding do you feel you would have needed per year to cover your educational expenses comfortably?
Amount (Omit cents)
\$.00

34. Think of your last year in college. How did you pay your educational expenses?
(Mark (X) the relevant sources below, and enter the approximate amount you received from each.)

	Amount (Omit cents)
01 ☐ Student loan	\$.00
02 ☐ Scholarship	\$.00
03 ☐ Federal "Work-Study" program earnings	\$.00
04 ☐ Educational Opportunity grant	\$.00
05 ☐ Summer employment	\$.00
06 ☐ Employment during term, other than "Work-Study"	\$.00
07 ☐ Own savings	\$.00
08 ☐ Family help	\$.00
09 ☐ G.I. Bill	\$.00
10 ☐ Other	\$.00

35. Which of the following sources of financial assistance do you find generally acceptable?
Which ones unacceptable?
(Mark (X) acceptable or unacceptable for each source.)

	Acceptable	Unacceptable
Student loan	1 ☐	2 ☐
Scholarship or grant	3 ☐	4 ☐
Help from family or friends	5 ☐	6 ☐
Paid employment provided by college	7 ☐	8 ☐

36. Whether or not you were able to meet your college expenses without much difficulty, would any of the following statements apply to you?
(Mark (X) either "Yes" or "No" for each statement.)

	Yes	No
With more funds available I would have continued in college	1 ☐	2 ☐
With more funds available I would have gone to a better college	1 ☐	2 ☐
Lack of funds meant that I had to work and my grades suffered	1 ☐	2 ☐
I have had to interrupt college for a while, and go to work full-time	1 ☐	2 ☐

37. During your last year in college about how much did you pay to cover your college-related expenses, such as tuition and fees, room and board, textbooks, etc.?
Amount (Omit cents)
\$.00

38. Please mark as many of the following statements as apply to you.

1 ☐ I have hesitated (would hesitate) to take out a student loan because I don't want to incur future indebtedness.

2 ☐ I feel that working during term interfered (would interfere) with my academic progress.

I don't like to accept money from my family for educational expenses because . . .

3 ☐ My family can't afford the money

4 ☐ I prefer to be financially independent.

39. How academically selective was the college you last attended?
(A selective college is one which admits only some of the applicants, generally those with better high school records.)

1 ☐ Highly selective

2 ☐ Somewhat selective

3 ☐ Unselective

40. Which best describes your living arrangements when you were last at college?

- 1 ☐ I lived in college or university housing (including fraternity or sorority housing)
- 2 ☐ I had my own residence (singly, with spouse, or with others; including rooming and boarding houses)
- 3 ☐ I lived in my parental home (including relatives and guardians) and commuted to the campus

41. About how many miles did you live from campus?

_____ Miles

00 ☐ I lived on campus

42. Which of the following best describes your main activity at the present time?

- 1 ☐ Working - Skip to 44
- 2 ☐ Looking for work
- 3 ☐ Keeping house
- 4 ☐ In Armed Forces
- 5 ☐ Attending trade, business, or other non-collegiate school
- 6 ☐ Other - Specify →
- } Continue with 43

43. Have you worked at all in a civilian job since leaving college?

- 1 ☐ Yes - Continue with 44
- 2 ☐ No - Skip to 47

44. Please describe the first job you worked at after leaving college. Be specific. Good answers, for example, would be. Accountant in a brokerage firm; or Life insurance salesman; or Laboratory technician in a hospital, etc.

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45. Sometimes having attended college helps a person in landing his first job. Sometimes one uses what he learned in college on that job. The following statements relate to such possibilities.

(For each statement, please mark how relevant it was for your first job following college.)

Things I learned at college were directly applicable to the work I did on the job. . . .

Though I used little or nothing of what I learned in college on the job, college gave me sufficient background to handle the work effectively. . .

College experience was, to the best of my knowledge, a formal requirement for employment in my job.

Though not strictly required for the job, college experience seemed to count in landing the job. . . .

The employer recruited from students at my college, and I was there to be hired.

I obtained the job through the personal influence of someone I knew at college. . .

It was college which aroused my interest in the kind of job I got.

Very relevant	Somewhat relevant	Little or no relevance
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3

46. About how much did you earn per week or your job? (Enter your gross amount or total earnings before taxes and other deductions.) \$

Amount (Omit cents)

.00

47. Did you graduate from a 4-year or senior college?

- 1 ☐ Yes - Skip to 61 on page 9
- 2 ☐ No - Continue with 48

48. Did you graduate from a 2-year community or junior college?

- 1 ☐ Yes - Skip to 50 on page 8
- 2 ☐ No - Continue with 49

49. What was the main reason you left college? (Enter reason below and skip to 51 on page 8.)

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50. Why did you not continue or go on to senior college? 1 ☐ I am planning on entering senior college 2 ☐ I have all the schooling I want or need 3 ☐ I cannot afford to go to senior college 4 ☐ I cannot get admitted to senior college 5 ☐ Other - Specify _____ Skip to 66 on page 10	56. Did you plan to return to college some time? 1 ☐ I don't know 2 ☐ No 3 ☐ Yes - Continue with 57a Skip to 58
51. When you decided to stop going to college did any college official give you any advice or offer any help so that you could continue? ☐ No - Why Not? _____ ☐ Yes - Please tell what happened. _____	57a. Do you plan to return to the same college you attended last? 1 ☐ I don't know 2 ☐ Yes, I will return to the same college. 3 ☐ No, I will enter a different college - Continue with 57b. Skip to 58 or page 9
52a. How do you feel about not going to college now? 1 ☐ Glad I am through with it 2 ☐ Sorry that I am not going now 3 ☐ Mixed feelings	57b. How would the college you hope to enter compare with the one you last attended? <i>(Complete the following statement by marking only the items that are relevant for you, and for each set of paired opposites mark only one item.)</i> The college I would enter, as compared with the one I left, would be: 1 ☐ Smaller 2 ☐ Larger 3 ☐ A 4-year college 4 ☐ A 2-year college
52b. Why do you feel this way? ☐ _____	1 ☐ More socially selective 2 ☐ Less socially selective 3 ☐ More bureaucratic 4 ☐ Less bureaucratic
53. Did you leave college because you felt that you had obtained all the formal education you wanted or needed? 1 ☐ Yes 2 ☐ No	1 ☐ A commuter college 2 ☐ A residential college 3 ☐ More expensive 4 ☐ Less expensive
54. Did you leave college even though you had not graduated because you felt that you had learned enough to qualify for the kind of job you wanted? 1 ☐ Yes 2 ☐ No	1 ☐ More vocational 2 ☐ Less vocational 3 ☐ More racially integrated 4 ☐ Less racially integrated
55. Did you leave college because an attractive job opportunity came along that you didn't want to turn down, even though you hadn't graduated? 1 ☐ Yes 2 ☐ No	1 ☐ Academically stronger in my field of interest 2 ☐ Academically stronger in more fields of study 3 ☐ Academically more rigorous 4 ☐ Academically less rigorous
	1 ☐ More liberal 2 ☐ More conservative 3 ☐ A public college 4 ☐ A private college
	1 ☐ More impersonal 2 ☐ Less impersonal

58. Financial problems make it impossible or extremely difficult for some persons to complete their college careers.

(Please mark how relevant to you each of the following statements was in your case.)

I ran out of my own money, and couldn't secure enough outside funds to continue in college

I found that college required so much money that I had little or nothing left for other important things

I had to take a job to finance college, and found that work and study were too great a burden, or just didn't mix well.

My family was no longer able to provide me with sufficient financial assistance to remain in college

Very relevant	Some-what relevant	Little or no relevance
1	2	3
1	2	3
1	2	3
1	2	3

59. Some persons leave college because of academic problems, such as poor marks, or because of dissatisfaction with the academic experience.

(Please mark how relevant to you each of the following statements was in your case.)

I had serious scholastic problems (poor grades, falling behind in the work, etc.) and I was obliged to leave, or saw no point in continuing .

In an academic sense, I felt that the courses and/or instruction at college were poor or "irrelevant," so I left

Overall, I simply found that I disliked college, so I left . .

In terms of my interests or abilities, I felt it would be better to transfer to a trade, business, or other school . .

I felt that I had entered the wrong college for me personally, so I left.

After 12 years of grammar and high school, plus some college, I just wanted to quit school - -

- permanently

- for a time at least . .

Although I did not actively dislike college, I found that I preferred to leave and look for a job (get married, etc.) . .

Very relevant	Some-what relevant	Little or no relevance
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3

60. Apart from finances and academic problems, there are a number of other problems that often lead to the decision to leave college prior to graduation.

(Please mark how relevant to you each of the following statements was in your case.)

I got married (or had a child), and although I could still afford college, I found that new interests and responsibilities made college difficult or impossible

I was drafted into the Armed Forces.

I voluntarily decided to enter the Armed Forces

I had serious problems or dissatisfactions with the college authorities or administration, and I left college largely as a result of such conflicts

Health or psychological problems forced me to leave

Very relevant	Some-what relevant	Little or no relevance
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3

61. Think back to the time when you applied for college entrance.

(Please mark how applicable to you each of the following statements was at that time.)

Strong pressures had been brought to bear upon me to enter college by my parents or other relatives

Strong pressures to enter had been brought to bear by teachers, guidance counselors, or other persons at school

Most of my friends and/or classmates were planning on college, and this influenced my own plans

I was influenced by all the newspaper, radio and television emphasis on the need to go to college.

I thought that the best way to earn more money and get ahead in life was to go to college

Highly	Some-what	A little	Not at all
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4

62. Now think of your own personal feelings at the time you applied for college.

(Please mark how applicable to you each of the following statements was at that time.)

I, personally, wanted to go to college

I, personally, did not want to go to college

I, personally, simply assumed that I would go to college as a matter of course

Very	Some- what	A little	Not at all
1	2	3	4
1	2	3	4
1	2	3	4

63. Now think of your perception of college at the time when you applied for entrance.

(Please mark how applicable to you each of the following statements was at that time.)

I had a reasonably clear idea of just what I wanted to get out of college

I had a realistic idea, by and large, of what college would be like

I expected that there would be aspects of college which I would not like

Very	Some- what	A little	Not at all
1	2	3	4
1	2	3	4
1	2	3	4

64. Now think of what happened to you once you got to college.

(Please mark how applicable to you each of the following statements was at that time.)

I enjoyed college at first, but disliked it increasingly as time passed

I disliked college from the start

I objected to the bureaucratic nature of college

I didn't feel that students had sufficient voice or influence in student affairs, or in college policies and practices in general

I objected to the basic ideology of those who ran the college

I objected to specific policies and/or practices of those who ran the college

In general I felt that the college was old fashioned and had not adapted itself to changing times

I disliked the academic pressures I encountered at college

I objected to rules or requirements of a nonacademic nature

I objected to academic rules or requirements

Very	Some- what	A little	Not at all
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4

65. Now think of your own state of mind once you got to college.

(Please mark how applicable to you each of the following statements was at that time.)

I felt depressed, alienated, or otherwise psychologically uncomfortable right from the start of college

I felt all right at the start of college, but did not feel all right later on

I wasn't prepared for the level of competition from other students

My college was impersonal in its relations to students, and this was upsetting to me

In college I experienced what has been called an "identity crises"

Very	Some- what	A little	Not at all
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4

66. Since we plan to repeat this follow-up once again, we would appreciate the names of two persons who will always know where you are.

Name
Mr.
Mrs.
Miss

Address (Number and street)

City State ZIP code

Telephone (Area code and No.) Relationship to you

Name
Mr.
Mrs.
Miss

Address (Number and street)

City State ZIP code

Telephone (Area code and No.) Relationship to you